

1608/359.
T H E
GARDEN VADE MECUM,
O R
[COMPENDIUM OF GENERAL GARDENING;
A N D
D E S C R I P T I V E D I S P L A Y
O F T H E
Plants, Flowers, Shrubs, Trees and Fruits,
A N D
G E N E R A L C U L T U R E :

C O M P R I S I N G

A systematic Display and Description of the several Districts of Gardening and Plantations, under separate Heads ; giving Intimations of the Utility, general or particular Plans, Dimensions, Soil and Situation, &c. and of the various respective Plants, Flowers, Shrubs, Trees and Fruits, proper for, and arranged in each District ; with general Descriptions of their Nature of Growth, Temperature, principal and particular Uses, Methods of Propagation and general Culture, in their respective Garden Departments :

C O N S I S T I N G O F

THE FLOWER GARDEN, PLEASURE GROUND,
SHRUBBERY AND PLANTATIONS,
FRUIT-GARDEN AND KITGHEN-GARDEN,
GREEN-HOUSE AND HOT-HOUSE.

By JOHN ABERCROMBIE,

Upwards of Forty Years Practical Gardener, and Author of
"EVERY MAN HIS OWN GARDENER."

D U B L I N :

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M,DCC,XC.

THE DESIGN of the present small work on Gardening, is intended as a General Introduction to the Systematic Knowledge of the various different Dispositions, and that of the various Plants, &c. relating thereto; each Disposition being displayed under a distinct Head, consisting of the Flower-Garden and Pleasure-Ground, Shrubs, Berry and Plantation, Fruit-Garden and Kitchen-Garden, Green-House and Hot-House, &c. not in the manner of a flowering-Calendar; but each Division is systematically described throughout, in regard to its respective Culture, Plant, Time, Season, proper Soil, Situation, &c. and under each is a full Disposition of the different Species and Varieties of Shrubs, Flowers, and Fruits, as they are or occasionally cultivated thereon, naturally arranged, describing their Time and Temperature of Growth, particular, and general Use, different Methods of Propagation, sowing, planting, and general Culture, with that of the several respective



P R E F A C E.

THE Design of the present small Work, on Gardening, is intended as a General Introduction to the systematic Knowledge of the several different Districts, and that of the various Plants, &c. relating thereto; each District being displayed under a distinct Head, consisting of the Flower-Garden and Pleasure-Ground, Shrubbery and Plantations, Fruit-Garden and Kitchen-Garden, Green-House and Hot-House, &c. not in the manner of a Monthly Calender; but each Division is systematically described throughout, in regard to its respective Utility, Plan, Dimensions, proper Soil, Situation, &c. and under each is a full Display of all the different Species, and Varieties of Plants, Trees, Shrubs, Flowers, and Fruits; as are generally, or occasionally cultivated therein, all systematically arranged, describing their Nature and Temperature of Growth, particular, and general Uses, different Methods of Propagation, Sowing, Planting, and general Culture, with that of the several
respective

respective Districts; the whole comprising a compendious System of general Gardening, and the different Tribes of Plants and Trees, for Use, Ornament, and Variety; displaying each separate District, and its respective Plants in one point of View; and the Culture thereof, all under the same Head.

In the Flower-Garden and Pleasure-Ground, is described the general Plan, with the arrangement of all the most esteemed ornamental Flowers in different Divisions, or Tribes, according to their Nature of Growth, Duration, &c. such as Annual Flowers, Biennials, Perennials, and Bulbous and Tuberous-rooted Kinds,—the Annuals, or one year Plants, being of different Temperatures, as Hardy, for sowing in the open Ground, and Tender for raising in Hot-Beds, are displayed in separate Tribes accordingly; and the Perennials and Biennials of the Fibrous and Bulbous-rooted Tribes, are also each displayed under its separate Head; explaining the general and particular Uses, Methods of Raising, Planting, and Culture in the several Compartments of the Flower and Pleasure-Garden.

The Shrubbery and Plantations are described, general and particular Plans; with a Display of all the Species of Shrubs, and Trees, both for ornamental and useful Planting in those Districts, describing their general and particular Merits, propa-



P R E F A C E.

Propagation, Raising, Methods and Order of Planting, and general Culture.

The Fruit-Garden is also fully displayed, with the different Species of Fruit-Trees, and their respective Varieties of Fruit; particular and general Merits of the different Species, Methods of Raising, Training, Planting, Pruning, and general Management—to obtain plentiful Productions of Fruit of the different Kinds.

The Kitchen-Garden is also described, and that of the different Plants, and various Crops, with the Methods of Sowing, Planting, &c. to obtain them in the fullest Perfection and abundance in the different Seasons.

Also the Green-House and Hot-House are separately displayed, their principal, or general Utility, proper Plan, and Dimensions; and the various Species of Plants of each District are systematically arranged in their proper Genera, under the Botanic or Generical and English Family Names; describing the Nature and Temperature of those of each Compartment; the general Methods of Propagation and Culture, with the practical Management of each of the above Districts, and Plants contained therein.

That

That agreeable to the above Methods of arranging the several Districts, and their respective Plants, Trees, Shrubs, &c. displaying the Utility, Plan, &c. of each, separately, the whole general culture of any particular Division is seen at once under its respective Head.

Feb. 17,
1789.

JOHN ABERCROMBIE.

CON-



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THE
GARDEN VADE MECUM.

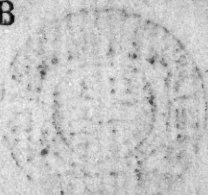
FLOWER GARDEN AND PLEASURE-
GROUND.

AND A DISPLAY OF THE PROPER FLOWERS,
SHRUBS, AND TREES.

A Flower garden, or borders, or other compartments for the culture of ornamental flowers, and beautiful flowering shrubs, more or less, is always desirable, and a flower garden and pleasure-ground may either be planned all in one in a varied order, or occasionally distinct compartments, in borders and shrubbery clumps, for herbaceous flowers, and shrubs separate; generally allotting some spacious borders on the boundaries of the principal walks and lawns, for a collection of the choicest flowers that blow in succession all the Spring, Summer, and Autumn months, from January or February till October or November, or a space may be also assigned entirely for a flower garden, laid out in regular borders and beds, three or four feet wide, for some particular or different principal sorts of flowers.

That in a general plan for a flower and pleasure garden together, it is sometimes laid out in compartments

B



ments of grass lawns, flower borders, shrubbery clumps, gravel walks, &c. commencing often in a capacious open lawn of grass, proceeding immediately from or near the main habitation; having each side ornamented with spacious borders, clumps, and other divisions, for flowers, shrubs, and ornamental trees, with a gravel walk extending along either next the lawn in front of the flower borders and shrubbery clumps, or behind, or conducted in a moderate serpentine order, between the flower and shrub compartments, thereby display a greater diversity in the excursion through the walks; or in other designs, sometimes a grand or main walk is extended from the dwelling right along the middle of the ground, either in a straight line, or in gentle serpentine bends, with noble borders for flowers, and raised swelling clumps for curious shrubs, on each side of the walk, and with other smaller walks branching off at intervals from the main one, in the same order, bounded also with flower and shrub compartments, with intervening divisions of grass ground, shrubbery and gravel; likewise a walk carried round towards the outer boundaries of the garden, the walk having compartments on each side, either in continued capacious borders for various flowers and flowering shrubs, or some in separated detached clumps of different forms and dimensions raised in gradual swells, with the sides displayed in sweeps and curves, and separated by gravel or grass walks and lawns; and from this boundary, walks, &c. Others are run off towards the interior divisions, consisting of compartments for flowers and shrubs, and other pleasurable plantations, walks, and spaces of grass, water, &c. and in the different shrubbery divisions, planted with ornamental shrubs and trees, may have also flowers disposed between and towards the front.

Likewise sometimes groves and thicket plantations of trees and shrubs are introduced in some boundary districts, beginning near or at a moderate distance from the main house, for shady walks in Summer, with borders on the sides, in which are admitted several

forts



sorts of flowering plants that are adapted for shady situations.

And where there are low premises eligible to furnish water, either naturally or acquired, at the terminations of lawns, &c. or other proper situations where convenient, at some moderate distance from, and generally in view of the habitation, an ornamental compartment of water may be formed, either in imitation of a natural order, or in a canal, bason, &c. and which, if the water is not naturally copious to furnish them properly at all seasons, should have the bottom and sides well clayed, at least six or eight inches thick, to retain the acquired water, and coarse gravel laid over this three inches thick, or more, both to preserve the claying, and to render the water clear—and the adjacent ground gradually sloped to the water, and generally laid down in grass.

In the general plan commonly allot gravel walks for principal walking at all seasons, extending in the order above intimated to all parts of the ground, and with open lawns of grass, to admit of prospect from the habitation, &c. and other grass divisions continued from the lawn between the boundary shrubbery clumps, both for dividing or separating these compartments, more or less, as well as to display greater diversity in the plan, and for occasional walking in Summer, &c. in dry weather, and in the different compartments for flowers, shrubbery and other close plantations have the ground generally digged, and remain for digging occasionally; but where spacious walks, and groves of stately trees are designed, the ground should commonly be laid down in grass.

The grass divisions in lawns, walks, &c. may be formed either by laying the ground with grass turf cut from a close-pastured common, or other grass premises where the grass is fine, short, and the surface close and even; or extensive lawns, &c. too considerable for turfing, may be sowed with grass seed saved from some finest clean hay, that the compartments of grass

ground may form a fine, clean and close sward accordingly.

The principal borders and shrubbery compartments immediately adjoining the gravel walks may be edged, some with box and thrift, others with strawberries, and for variety, some occasionally with daisies, pinks, Londonpride, primroses, violets, polyanthus, grass verges, &c. and in some parts have verges of grass continued along to the walk from the intervening lawns, or grass divisions; or in shady and wood walks under the spread of trees, and shrubs, the edges of the borders being made up firm and regular, some may be edged with wood strawberries, primroses, violets, small periwinkle, and other small wood plants that will grow under shade; or where considerably extensive, the edges may only be made up firm and even, and remain in that order, or have small grass verges.

The gravel walks should be laid with the finest coloured pebbly gravel of a moderately binding nature, either pit gravel, or according to what the different parts of the country may most conveniently afford, that of the pit gravel which is mixed with a high coloured light sandy loam, is preferable both in regard to colour, and for its binding property, to remain firm and agreeable for walking; the proper gravel for walks should abound with small and moderate sized pebbles, not screened fine, especially for considerable walks, only the largest rough pebbles raked out; but as some places afford gravel consisting almost wholly of small pebbles without any mixture of binding sand or loamy particles, in which case it is proper to add a small quantity of light loose sandy loam, or such as will bind moderately without clogging to the feet when wet weather, the bottom of the walks may be laid with any rough materials three inches thick or more, both to keep the surface drier, and prevent worms casting up earth from the bottom to deface the walk, and on this lay the proper gravel six inches thick or more, that it may more effectually keep down the worms as above-said, and being of a proper depth to admit

admit of turning it every Spring to give the surface a fresh lively appearance, generally in laying the walks finish the surface gradually swelling in a moderate rounding form.

Or when designed to have a distinct compartment wholly for a flower garden, laid out into regular beds, in which, to cultivate the more curious or capital sorts of flowers, such as the principal kinds of the bulbous and tuberous-rooted tribe, as the most esteemed varieties of tulips, hyacinths, jonquils, polyanthus-narcissus, fritillaries, crown-imperials, bulbous irises, amaryllis, anemones, and ranunculuses, &c. as also of any desirable fibrous and fleshy-rooted kinds, both of perennials, biennials, and annuals, an eligible portion of lightish mellow ground may be assigned for that purpose, either inclosed or remain open and conspicuous, or sometimes bounded with a low shrubby plantation, four to five or six feet wide, of the most beautiful flowering shrubs, or having, however, the ground laid out in regular order, forming an outward border, four feet wide, leaving a space next to this for a walk, then form another border the width of the former, and then the internal quarter divided into beds three or four feet wide, with alleys twelve to eighteen inches, or two feet wide between the beds, which, and the borders may either be edged with box or thrift, or some with daisies, &c. or in want of sufficiency of these for edgings, the edges may be beat up with a spade, firm, even, and straight, and the walks and alleys laid with fine gravel, &c.

But as in many places, limited to a small or moderate extent of ground, the flower garden, &c. and kitchen ground are planned all in one, having borders next the main walks for the flowers, and some best low-growing flowering shrubs; and the internal quarters serve for the cultivation of the kitchen esculents; generally forming a border all round next the wall or outward fence, three or four to five or six feet wide, or more, a walk next to this the same width, or six to eight or ten feet in larger gardens, then another bor-

der next the wall the width of the first, and within this have the large quarters for the kitchen ground, and if the dimensions of the garden in width admits, may have a principal middle walk extending the whole length of the ground, with a handsome flower border on each side, and towards the back part of these borders adjoining the internal quarters, may have a range of espalier fruit trees, or some backed with flowering shrubs, and if the borders, where shrubs are intended, are raised sloping highest behind, they would have a more agreeable effect, and in which borders surrounding the quarters, may sow and plant various sorts of flowering plants for ornament, and the principal outward borders next the wall, hedge or other fence, may serve for raising early and late crops of several sorts of kitchen vegetables, and the interior quarters, to furnish the principal crops of esculents; and in which may likewise have some standard fruit trees of different sorts planted at proper distances not to overspread the ground with their extended branches.

Or sometimes in small grounds, a flower garden, or flower and pleasure-ground is laid out in a small grass lawn next the dwelling, with flower compartments and shrubbery clumps on both sides, and at the termination; planned in moderate sweeps and curves toward and from the lawn, and with a gravel walk leading through the shrubbery in a serpentine manner; and beyond this flower and shrubbery district, sometimes commences the kitchen and fruit garden all within the same general enclosure, and in which also, if required, the borders adjoining the principal walks thereof, may be allotted for flowers agreeable to the foregoing hints.

With regard to soil and situation for a flower garden and pleasure-ground, it may just be remarked, that all the sorts of hardy garden flowers and flowering shrubs, and ornamental trees, &c. will succeed in any common or moderately good ground of a lightish mellow texture; and the situation not very material, if not remarkably low and wet, may either be level or moderately rising or sloping position, or where unequal-
ly

ly high and low, it may be regulated by lowering or raising the inequalities as may be required, or some parts in more extensive pleasure grounds, may be varied in moderate gradual risings, elevations, and declivities, &c. or where any particular improvement in soils, composts, or situations are necessary for any choice kinds of flowers and shrubs, it is generally hinted under their respective heads or divisions of the different tribes.

The inclosure, or general outward fence may either be a wall or paling, &c. or a hedge planted in the side or top of a bank, raised and defended by an outward ditch, or some parts where the situation is eligible, may have a sunk fence in a fosse or ha-ha, to admit of distant prospect, more especially at the termination of the ground, or as convenient.

The several compartments of borders and shrubby clumps for the reception of the various flowers and shrubs, &c. should be properly digged one spade deep, either in Autumn or Spring, at the time for sowing and planting; and generally raked even in a neat manner, especially the flower borders; and as to the seasons and methods of sowing and planting, it is explained under the respective heads of the different tribes of plants, shrubs, and trees.

For the foregoing different compartments of the flower and pleasure-ground, there is a numerous tribe both of the herbaceous flowering plants, and the woody or shrubby and tree kinds, each described under their proper heads; but shall first proceed with the herbaceous tribe in different divisions, according to their temperature and nature of growth; previously remarking that the herbaceous flowering plants, i. e. plants of an herb like nature, differ from the woody, or shrub and tree kinds, in that they are in the most part, both of inferior growth in respect to dimensions, and produce soft stems, not durable as in trees and shrubs, but mostly die down to the ground every Autumn, and renewed in the spring with young stems from the root; hence they are of the nature of herbs, (herbaceous)

very few, however, retain their stems two or three years: and, in the annual herbaceous tribe, they wholly, stem and root, decay the same year the plants are raised, which, and the biennial or two years plants, require to be raised every year in successional supplies from seed; and the perennials, or plants of many years duration, are raised both from seed occasionally, in many sorts, and being durable in the root, of several or many years continuance, they also propagate by off-sets, &c. of the continuing root, some raised also by layers and cuttings; but the woody, or tree and shrub kinds once raised, are abiding in root, stem, and branches, encreasing in growth in the greater part, for many years, and some trees continue growing several centuries, of which the oak and chesnut, in particular, are supposed to stand near a thousand years, and acquire a vast magnitude.

As therefore, the herbaceous flowering plants, and the woody tribe, for the embellishment of the foregoing different compartments of the flower garden, and pleasure ground differ very materially, they are arranged and described in separate divisions, beginning with the herbaceous kinds, and as these consist of annuals, or one years plants, biennials or two years plants, and of perennials, or plants of several years duration in the root; and likewise of bulbous and tuberous-rooted flowers, which are also perennial, shall display the species and varieties of each tribe under a separate head, with their respective general descriptions, peculiar merits, uses and culture; then of the shrubs and trees; each in the following order:

FIRST
A DISPLAY AND DESCRIPTION
OF THE
Principal Ornamental Flowers
FOR THE
FLOWER GARDEN and PLEASURE-GROUND,
AND THEIR
GENERAL CULTURE.

FLOWER

FLOWER GARDEN.

Under this head is exhibited all the principal herbaceous, ornamental garden flowers which are proper to adorn the beds, borders of the flower garden and pleasure-ground, and are here arranged under different divisions or tribes, according to their nature of growth; and those of each division are fully explained, with their respective methods of propagation, raising, and general culture; consisting of, 1. Annual Flowers, or one year's plants, continuing but one Summer.—2. Biennial, or two-year's plants.—3. Perennial Flowers, or those of many years duration; and—4. Bulbous and Tuberos-rooted Flowers, which are also perennial, or of many years continuance in the root.

I. ANNUAL FLOWERS.

A NNUAL Flowers are such as are of but one year's continuance, or principally only one summer, some only two or three months, being always raised from seed in the spring, flower the same year in summer and autumn, and wholly decay, top and root, at the approach of winter, none surviving to flower again the year following, so that fresh successional supplies must be raised from seed annually; and which tribe of annuals, producing very ornamental flowers for adorning the flower-beds, borders, &c. and to sow and plant in pots, they are highly deserving of culture, as beautiful summer ornaments to the garden, from May or June till November, succeeded by plenty of ripe

seed in autumn, for sowing the following spring, and have this particular merit, of their all flowering the same year they are raised, which in all the sorts is easily effected, by sowing the seed in February, March or April, some in the borders, beds, pots, &c. of common earth, at once, where they are to remain to flower, as in the numerous tribe of hardy annuals; others, that are of a tender nature, require to be sowed and raised in a hot-bed, or under a frame and lights, or hand-glasses, &c. or in a warm south border, for transplanting into the even borders, beds and pots, in May and June, at the commencement of warm settled weather: as hereafter fully explained, under their proper heads.

As the annual flowers are of different temperatures, in respect to some being hardy for sowing in the open ground, others tender, requiring to be raised in a hot-bed, or under occasional shelter during the cold season of spring, they are divided accordingly into three classes or tribes, *viz.* Hardy Annuals,—Tender Annuals,—and Most-tender Annuals; with the culture of each under its respective head.

HARDY ANNUALS.

THE HARDY ANNUALS consist of a numerous tribe, that admit of being sowed and raised in the open ground, or in beds, borders, pots, &c. of natural earth, generally sowed at once where they are to remain for flowering, principally in small patches, dispersed about the borders and beds in assemblage with other flowering plants, or some in drills in rows, in beds separate, and remaining where sowed, as above observed; those sowed in patches, if they come up very thick, will require to be more or less thinned according to their sizes of growth, which, in different species, is from five or six inches to so many feet in height, or more; or, in their young state, some may be occasionally transplanted, if required to supply vacancies in any particular compartment.

This

This tribe of Hardy Annuals comprise many very pretty flowers, consisting of the following species and varieties.

ADONIS FLOWER (<i>Flos Adonis.</i>) Red Morocco, or Bird's-eye	CANDY Tuft —White —Purple —Large White —Crimson
ALKEKENGI , or Annual Winter Cherry— See also Tender Annuals	CATCHFLY (Lobels) —Purple —Red —White
ALYSSON , or Madwort —White —Small Spanish	CANNABIS , or Hemp —Cultivated or common
AMARANTHUS —Prince's Feather —Love lies Bleeding, Am. —Livid coloured —Panicle Flowering —Bloody —Retroflexed	CLARY —Purple topped —Red topped
ANTIRRHINUM , or Snap-Dragon, &c. —Major or Greater —Minor or less —Three-leaved annual Toad's Flax —Two-dotted flowered	CALENDULA , or Marigold —Yellow flowered —Orange coloured —Lemon coloured —Ranunculus flowered —Many flowered —Proliferous flowered ; many smaller flowers emitted from the side of the main one —Reflexed flowered —Double flowered of each —Violet and White Cape Marigold —Mule Cape Marigold
ATRIPLEX , or Orach, red-leaved, called Red Spinach	CATERPILLAR Plant —Vermiculated or common —Murexed or prickly —Sulcated or furrowed
BALM (Moldavian)	CONVOLVULUS —Minor or small blue
BALSAM (yellow) or Touch-me-not	
BASIL —Greater or Common —Least or Bush-basil	
BELVIDERE , or Summer Cypress ; esteemed for its pyramidal growth, resembling a young Cypress-tree	

Great

- Great blue
- Striped great blue
- Purple
- Great white
- Striped small blue
- Great deep blue
- CORN BOTTLE**, or **Cy-**
anus
- Common blue bottle
- Purple
- Red
- White
- Striped
- CUCUMBER**, (Spiriting)
- DEVIL** in a bush, or **Ni-**
gella
- White Roman
- Blue Spanish
- GOURD**, Squash, &c.
- POMPION** Gourd, or
Pumpkin
- Great round fruited
- Oval
- Oblong
- Smaller round
- Half globular
- Orange shaped
- Top-shaped
- Pear-shaped
- Green fruited
- Yellow
- White
- Stone coloured
- Blush coloured
- Liver coloured
- Party coloured
- Striped
- Marble
- BOTTLE** Gourd; the
shell becoming hard and
- woody, which, in some
large sorts, having the
pulp taken out, is some-
times converted into li-
quid utensils
- Flaggon Gourd
- Oblong fruited
- Round
- Bottle shaped
- Long horn shaped
- Top shaped
- Cylindric fruited
- Taper fruited
- Striped
- BUCKLER** Gourd, or
Squash; the fruit de-
pressed, flattish target
shaped, &c. and knotty
- Depressed fruited
- Orbicular fruited
- Hemispherical
- Turbinated or top shap-
ed
- Conical fruited
- Star fruited
- Citron shaped
- White fruited
- Yellow
- Striped
- WARTED** Gourd; the
fruit knotty warted
- Round fruited
- Oval
- Oblongish
- Flat fruited
- Bottle shaped
- Orange shaped
- Lemon shaped
- Carbuncled
- Yellow fruited

Stone

- Stone coloured
- White
- Striped
- HEDGE-HOG** Trefoil,
curious in its seed pods,
prickly echinated
- Shaggy, short globular,
hedge-hog podded
- Hooked prickled
- Jagged with pods,
hedge-hogged
- HONEY-WORT**, or Ce-
rinthe
- Greater
- Lesser
- HOLLY HOCK** (Chinese)
- INDIAN CORN**
- Tall growing
- Dwarf
- Long spiked
- Short spiked
- Thick spiked
- INDIAN PINK**
- Red
- Purple
- Variegated
- White
- Imperial large flowered
- Double flowered
- KETMIA**, (Bladder) or
Venetian Mallow, or
Flower of an Hour
- KIDNEY-BEAN** (Run-
ner)
- Large scarlet
- Dwarf scarlet
- Large white
- LARKSPUR**
- Upright, with a single
unbranching stalk, many
varieties, viz.
- Blue flowered
- White flowered
- Purple flowered
- Rose or Blush coloured
- Silver coloured
- Ash coloured
- Striped blue
- Striped white
- Double of each
- White Rocket Larkspur
- Rose Rocket Larkspur
- Blue Rocket Larkspur
- Dwarf Rocket Larkspur
- BRANCHING larkspur**
- Blue flowered
- White
- Purple
- Striped
- Double flowered
- LAVATERA**, or Cretan
Mallow
- Red flowered
- Purple flowered
- White
- LINARIA** (annual) or
Toad's Flax
- LOVE APPLE**, see *Ten-
der Annuals*
- LUPINE**
- Yellow
- White
- Small blue
- Great hairy-leaved blue
- Hairy rose-coloured
- Variable seeded, blue
- MALLOW**
- Curled-leaved Syrian
Mallow
- Oriental China Mallow
Venetian

—Venetian Mallow
MIGNONETTE
 —Odorous, or sweet-scented
 —Upright scentless
MOONWORT, Honesty
 or Sattin Flower
 —Annual Moonwort
NASTURTIUM, or Indian Cress
 —Major or greater
 —Minor or dwarf
NOLANA prostrata, or Prostrate blue Nolana
NIGELLA (Devil-in-a-Bush) or Fennel-flower
 —White flowered
 —Blue Spanish
 —Double flowered
PALMA - CHRISTI, (Christ's Palm) very large palmated leaves
 —Tall-growing
 —Dwarf
 —Deeply palmated leaved
 —Greater broad leaved
 —Smaller leaved
 —Grey leaved
 —Green leaved
 —Six-lobed leaved
 —Seven-lobed leaved
 —Green stalked
 —Red stalked
 —Grey stalked
 —Targetted scolloped-leaved
 —Target form undivided leaved
PANSY, or Heart's-Ease,
 Three-coloured Violet,

or Trinity Flower
 —Common smaller flowered
 —Greater upright Dutch, with large flowers
PEA
 —Umbel flowering or Crown Pea
 —White flowered
 —Blush coloured
 —Painted Lady
PEA (sweet scented)
 —Purple flowered
 —White
 —Painted Lady
 —Scarlet flowered
 —Tangier Pea
PEA (winged)
PERSICARIA
 —Tall oriental
 —Dwarf
 —White
POPPY
 —Somniferous tall growing
 —Red flowered
 —Purple
 —White variegated
 —Red and white spotted, or Carnation Poppy
 —Double flowered of each
 —Double, feathered flowered
 —Double curled flowered
CORN Poppy
 —Double Red
 —Double purple
 —Double white
 —Double variegated, or Dwarf Carnation Poppy
 Poppy

Poppy (yellow horned)

SCABIOUS

- Starry flowered
- Greater jagged leaved
- Jagged leaved minor
- Purple flowered
- White flowered
- Least starry flowered
- Black-purple Musk Scabious
- Dark-purple flowered
- Red-purple
- White
- Proliferous Dwarf Starry Scabious

SNAIL and Moon Trefoil; curious in their seed-pods of various forms, snail-shaped, moon-shaped, shield-shaped, &c.

- Orbicular snail podded
- Moon-shaped
- Shield-shaped
- Top-shaped
- Turned-podded
- Intervexed, greater long-thorned podded
- Murexed two-fruited
- Coronated
- Ciliated, collected globular-podded

STOCK Gilliflower, (ten week's)

- Purple flowered
- Red
- White

—French dwarf

—Double of each

WALL flowered leaved

Ten week Stock

—White flowered

—Purple

—Scarlet

—Double flowered

STOCK (Virgin)

—Dwarf maritime

STRAWBERRY Spinach, or Blite

—Headed flowering Blite, or Strawberry Spinach

—Twiggy Blite, or Mulberry Spinach

SWEET Sultan, or Sultan Flower

—Purple flowered

—Red

—White

SULTAN Flower (yellow)

SUNFLOWER

—Giant Sunflower

—Dwarf Sunflower

—Yellow-flowered

—Sulphur yellow

—Double flowered

TOBACCO

—Virginia long-leaved

—Rustic, or hardy, round-leaved, of Europe and America

VENUS Looking-glass

—Purple flowered

—White

—Small

VENUS Navel-wort

XERANTHEMUM, or Eternal Flower

—Annual white flowered

—Red flowered

—Purple headed

—Hoary blue.

The above class of Annuals are all hardy enough to admit of sowing and raising them in the natural ground, in beds, borders, pots, &c. of common earth, any time from February or March till May, but the principal season for sowing the main supply is March and April, and in most sorts one sowing is sufficient to furnish a constant succession of flowering from June or July till October; though some quick-flowering kinds of short duration may be sowed two or three times, from March till June or July, to have a longer continuance of their flowers in regular succession, such as candy-tuft, virgin-stock, mignonette, &c. all generally sowed at once in the beds, borders or pots, where you design they shall flower, not transplanted, but to remain where sowed, except on particular occasions, if required to supply any vacant parts, some may be transplanted in their young growth.

In this tribe of hardy annuals, there are many species and varieties that produce beautiful ornamental flowers, eligible to introduce into the different compartments of the Flower-garden and Pleasure-ground, to adorn the beds, borders, shrubby clumps, and to flower in pots, &c. many of which continue flowering two or three months or more in the same plants, others are of shorter duration, but, take the whole together, they afford a constant succession of flowers from May or June till October or November; then wholly perish, top and root, as formerly observed.

Though some sorts are estimable principally for their particular modes of growth, singularity or curiosity of their foliage, seed-pods, fruit, sweet scent, &c. more than for any beauty of their flowers; such as the belvidere, for its upright thick pyramidal growth; artilex, or red spinach, for the colour of its leaves; strawberry spinach, for its strawberry like fruit; spirting cucumber, and yellow balsam, for their spirting seed-pods; the caterpillar plant, hedge-hog and snail trefoil, for the singularity of their seed-pods of various vermiculated forms, &c. the gourds, squashes, pumpkins, &c. both for their large extended growth, noble foliage,

foliage, large flowers and great variety of their fruit, of many different shapes, sizes, and colours; and mignonette, principally for its odorous scent.

As all the sorts are but of one summer's continuance, or some but two or three months, not remaining to propagate by the root, they therefore are propagated or raised only from seed, sowed every year in the spring, for flowering the ensuing summer.

The seed of all the sorts is sold by the Nurserymen and Seedsmen; and a small portion of each, or of any principal sorts that may be most esteemed, is sufficient to furnish any small or moderate garden; or, having once raised a supply of the plants to a flowering state in your own garden, you may easily save plenty of seed in most of the sorts every autumn, for sowing the succeeding year.

The principal season for sowing these hardy annuals is the Spring, in March and April; or in a mild temperate season, begin sowing some in February, especially larkspurs, candy-tuft, sweet peas, lupines, perficaria, or almost any of the other sorts; though, in general, March and April aforesaid is a certain successful season for sowing the principal supply.

The order of sowing these hardy sorts is principally in small patches, in the different beds, borders, pots, &c. to remain in the same place for flowering; observing, in sowing in the borders, beds, or other compartments, to dispose the low-growing kinds towards the front, such as candy-tuft, mignonette, ten-week's stocks, virgin stock, small convolvulus, nolana, Venus' looking-glass, Venus' navelwort, lobels catchfly, &c. Others of a larger growth have towards the middle of the borders, as larkspur, lavatera, sweet peas, large lupines, belvidere, sweet fultan, large convolvulus, love lies bleeding, prince's feather, &c. And the taller kinds sow towards the back part, as sunflowers, perficaria, nicotiana or tobacco, tree-amaranthus, large nasturtiums, scarlet runners, tall palmaristi; and as to the method of sowing, form small patches, with your hand or a garden trowel, about
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fix or eight inches diameter, and two or three to four or five feet distance, loosening and breaking the earth fine: then in each patch draw the top earth to one side, half an inch to an inch deep, in proportion to the size of the different sorts of seed, which then sow, each sort in separate patches, several, to many seeds in each of the smaller-growing kinds, that, when the plants come up, if too thick, the weakest may be thinned out; likewise of the largest sorts sow several seeds in each patch, to allow for thinning out the weakest plants, more or less, as required, according to their sizes of advanced growth: and, as you proceed in sowing, cover in the seeds with the earth, which was drawn off to one side of each patch for that purpose; and as you go on, if a small stick is placed to each patch, it will distinguish the places till the plants come up.

Or, in sowing hardy annuals, some may be occasionally sowed in drills, either along the middle or back part of flower-borders, &c. as sweet peas, larkspurs, &c. or, sometimes, these two sorts in particular are sowed in separate beds, each sort distinct, in drills lengthways a foot distance, more especially the painted-lady sweet peas and upright larkspurs, that, as each displays flowers of various colours, they may make a grand shew together under one point of view. Other sorts are also occasionally sowed in drills, as ten week's stock, either in continued rows in beds a foot asunder, or sometimes a single row along the edge or middle of beds or borders: also, sometimes, candy-tuft lupines, virgin stock, Venus' looking-glass, mignonette, and others of moderate growth, are sowed in drills in beds, or some occasionally in a row along the edge of a bed or border of the above low or moderate-growing kinds, to form a sort of temporary summer edging; though some of these sorts are apt to grow too spreading for this purpose of edging, such as the large candy-tuft, large Venus' looking-glass, &c. especially for small narrow borders, and for this occasion the virgin stock, being a small delicate-flowering plant, is more commonly

commonly esteemed ; it however continues but a short time in full bloom, but may be continued in succession, by sowing every month, from March till June or July.

And, if required to raise any particular ornamental flowering sorts of the hardy annuals in pots, either to place occasionally to adorn any compartment of the garden, forecourt, &c. or to place in a balcony, or windows of a dwelling-house, or court-yard, they may be sowed in the season before mentioned, February, March, April, &c. such as candy-tuft, lupines, mignonette, sweet peas, ten-week stocks, virgin stock, larkspur, convolvulus, nasturtiums, scarlet-runners, lavatera, Venus' looking-glass, pansies, or any other desirable sort. Having for this purpose middling-size pots, filled with rich light earth, sow the seed each sort in separate pots, in a patch in the middle, or whole width, and covered in with fine earth half an inch deep ; or large seeds, an inch.

After sowing the seeds, both in the full ground and in pots, if the season proves dry and warm in March, April, May, &c. give occasional light waterings, both before and after the plants come up.

The plants will soon come up in April and May, are generally to remain where sowed, and where they are come up too thick, they, when a little advanced in growth, should be thinned less or more, according to their different sizes ; in some, leaving several together in a patch, especially those of small or moderate growth, as adonis flower, candy-tuft, venus' looking-glass, venus' navel-wort, mignonette, convolvulus, sweet peas, larkspurs, lupines, snap-dragon, toad-flax or linaria, dwarf poppy, india pink, ten-week's stocks, virgin stock, nolana, &c. Others of larger growth, thin two or three in each patch, such as lavatera, oriental and curled mallow, large poppy, major nasturtium, gourds, spiriting cucumber, red spinach, strawberry spinach, princes feather, love-lies-a-bleeding, and other amaranthus, sweet sultan, marigolds, large Dutch lupines, Chinese hollyhocks, scarlet runners, scabius,

scabius, horned poppy, large nigella, &c. and of the largest growing kinds, generally retain but one good plant in each patch, particularly sun-flower, persicaria, palma-christi, tobacco, belvidere, tree-amaranthus, Indian corn, observing, in thinning, to pull or cut out the weakest inferior plants, retaining those of the most promising strongest growth, to remain for flowering; and as soon as thinned, give a moderate watering to settle the earth close about the roots of the remaining plants, after being loosened in thinning out the superabundancy.

After having thinned the patches of plants where necessary, their future culture is to keep them cleared from weeds, and in dry warm weather, during their young growth, give occasional waterings two or three times a week in May and June.

In their advanced or full growth, the large growing and climbing sorts will require support of stakes or sticks; such as the lavatera, Chinese holly-hocks, persicaria, sunflower, tobacco, large Indian corn, oriental and curled mallows, belvidere, palma-christi, tree amaranthus, love-lies-a-bleeding, and several other sorts of upright growth, and of climbers, large convolvulus, sweet peas, crown pea, scarlet runners, large nasturtiums, &c. and to all of which place the supports in due time, one stake or stick to each patch of plants; observing, to the climbing kinds, branchy sticks will be most eligible; and, of the climbers, may also be reckoned the gourds, some of which of the more moderate growths may have support of stakes to train them in an upright order, the others may be permitted to extend along the surface of the ground.

Thus, the plants, in general, will attain full growth in June, July, and August, and continue flowering in the different species till October.

Of the above tribe of hardy annuals, some sorts are occasionally transplanted, such, particularly, as ten week's stocks, India pinks, mignonette, which being thinned in their young growth in the patches where sowed, to three or four plants in each, those thinned

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out may be planted in the borders, beds, pots, &c. in patches of three or four plants together, and watered; also, occasionally, prince's feather, love-lies-a-bleeding, tree amaranthus, convolvulus, yellow sultan, persicaria, sunflowers, tobacco, and several others of the fibrous rooted kinds, while young, and are required to supply any vacant spaces; generally transplanting such as are intended in showery weather, if possible.

As several of the hardy annuals are of but short continuance in flower, as candy tuft, virgin stock, lupines, sweet peas, &c. that to continue them in succession of flowering all Summer, some should be sowed every month, from March or April till June or July.

To have some sorts of hardy annuals flower as early as possible in Summer, the seed may be sowed in Autumn, about September, such as larkspurs, adonis, India pink, persicaria, they will generally come up sooner and stronger in the following Spring than those sowed at that season, and flower sooner by two three or four weeks.

To save seed of the different sorts of hardy annuals, for next year's sowing, take opportunity to gather the heads and branches of seed according as they ripen in July, August, September, &c. and spread them to dry, then beat or rub out the seed, clear it from the husks, and put up each sort separate in papers, or bags, till next Spring.

According as the plants have done flowering in Summer and Autumn, and furnished the proper supplies of seed required, pull them mostly clean up by the roots.

Or of the Indian pink, in particular, may leave some roots in a dry soil, or in pots, they will often abide all winter, and flower early next summer.

TENDER ANNUALS.

THE annual flowers of this class being of a more tender nature than those of the foregoing, require to be raised and forwarded in hot-beds, from February, March,

March, or April, till May or June, then removed into the open air, some transplanted into the borders and beds of the flower-garden, others planted in pots, for placing occasionally to adorn any principal compartments; but as some of the plants of this tribe are moderately tender that may be raised in a gentle hot-bed, or occasionally in a bed of natural earth, under a frame, or hand-glasses, &c. or in a warm border, sowed in April, others are of a more tender nature, requiring to be sowed and raised in more substantial hot-beds, under frames and glasses, till the end of May, or beginning or middle of June; they are divided accordingly, into two classes, *viz.* moderately-tender annuals, — most-tender annuals.

MODERATELY TENDER ANNUALS.

THE annuals of this class are of a moderately tender nature, requiring either the assistance of a gentle hot-bed, in which to sow the seed in March or April, and to bring them forward in growth, or, in want of this, they will mostly succeed in a bed of natural earth, defended with a frame or hand-glasses, or even in a warm border, if not sowed till the beginning or middle of April; all for transplanting into the open borders, beds, and in pots, in the middle or latter end of May, or beginning of June; and which class of annuals comprise many very curious and beautiful ornamental flowers for decorating the different compartments of the flower garden, flowering from June, July, and August, till October, furnishing plenty of seed, then wholly die: consisting of the following species and varieties.

AFRICAN Marigold
—Yellow flowered
—Orange coloured
—Lemon coloured
—Dwarf growing
—Dwarf sweet-scented

—Double and single of each
—Quilled flowered
AMARANTHUS
—Tree Amaranthus
—Purple Amaranthus

Bloody

- Bloody, with compound spikes
- Bicolor, or two coloured leaved
- Tricolor, or three coloured leaved
- Pyramidal spiked

BROWALIA (blue flowered)

BALSAMINE, or balsam

- Red flowered
- Scarlet
- Purple
- White
- Variegated
- Striped
- Double and single flowered of each

CAPSICUM, esteemed principally for the variety of their different shaped seed-pods

- Red podded
- Yellow podded
- Long pendulous podded
- Short erect podded
- Heart podded
- Angular heart shape
- Bell shape angular podded
- Olive shaped
- Long taper podded
- Divided podded
- Red cherry shaped
- Yellow cherry shaped

CALENDULA, or Cape Marigold

CHINA Aster, or Queen Margaret

- Blue flowered

- Purple
- Red
- White
- Striped blue
- Striped red
- Striped purple
- Bonnet flowered, in varieties

- Quilled flowered

CHINESE Pink—See *India Pink*

CHRYSANTHEMUM

- Yellow flowered
- White
- Lemon coloured
- Quilled flowered
- Double and single of each

CUCUMBER (Patagonian)

CONVOLVULUS (scarlet)

CONVOLVULUS, large purple

- Large blue
- Large White

EGG Plant, or Melongona, curious in its egg shaped fruit

- White fruited
- Purple fruited

FRENCH Marigold

- Tall striped
- Dwarf striped

- Yellow
- Yellow and crimson

- Dark crimson velvet
- Sweet scented

GOURD Pompion, &c.

- See the Hardy Annuals; but

but may more properly be ranged in this class as being of a tender nature, will be more successful if sowed and raised in a hot-bed till May, and for transplanting into the open ground, especially the Gourd kinds—such as the

- Bottle Gourd, or Calabash
- Orange shaped
- Pear shaped
- Top shaped
- Lemon shaped
- Buckler shaped, or Squash
- Orbicular squash
- Star shaped Squash
- Caruncled
- Warty Gourd
- Striped Gourd
- Striped pear shaped
- Orange coloured
- Yellow
- White
- Stone coloured
- Sandy coloured
- Flesh coloured
- Party coloured

Many other varieties of different shapes, sizes, colours, and stripes—
See the Hardy Annuals

GLOBE Amaranthus

- Purple headed
- Red
- White

— Striped

— Spiked

HOLLY-HOCK (Chinese)

INDIA Pink

- Red and white variegated
- Purple flowered
- Red flowered
- White
- Imperial large flowered
- Double flowered

LOVE Apple, for the variety of its fruit

- Red fruited
- White fruited
- Yellow fruited
- Cherry shaped

MARVEL of Peru

- Yellow flowered
- Red flowered
- White flowered
- Purple
- White and yellow
- White and purple
- Purple and yellow
- Red and yellow
- Striped
- Sweet scented
- Long tubed

MELON (snake shaped fruited)

- White, cucumber shaped

MIGNONETTE

- Odorous, or sweet scented

NOLANA, blue

PALMA-CHRISTI; curious in its large upright growth,

growth; and very large	—Red
palmated leaves	—White
—Tall growing	—Dwarf French
—Dwarf	—Double flowered of each
—Deeply palmated leaved	—Wall flower leaved ten
—Greater broad leaved	week's stock
—Smaller leaved	—Red flowered
—Grey leaved	—White
—Green leaved	—Purple
—Six-lobed leaved	—Scarlet
—Seven-lobed leaved	—Double
—Green stalked	TOBACCO
—Red stalked	—Long leaved Virginian
—Grey stalked	—Broad leaved
—Targetted scalloped	—Narrow leaved
leaved	TEN week's stock—See
—Targetted undivided	Stock Gilliflower
leaved	TREE Amaranthus
PERSICARIA	—Greater tree like
—Oriental tree Persicaria	—Lesser with spikes trail-
—Dwarf oriental	ing on the ground; or
SULTAN Flower (yellow)	Love-lies-a-Bleeding
STOCK Gilliflower (ten	ZINNA
week's) or ten week's stock	—Red flowered
—Purple flowered	—Yellow flowered

In the above class of Tender Annuals, it may be observed that there are some species and varieties which are also arranged among the Hardy Annual Flowers, intimating that they are rather less hardy than the others of that class, and have introduced them among the moderately tender kinds, in order to have the advantage of the same culture where convenient, by sowing and raising them in a moderate hot-bed, or under protection of a frame or hand-glasses, awning of mats, &c. to forward them more effectually, and sooner, to a proper size for flowering; and by ranging them in the tribe of Hardy Annuals, implies that, in want of hot-beds or conveniences of protection, they may also be raised in the open ground: likewise, some are arranged in the

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above Tender class, which are also introduced in the collection of the Most-tender Annuals, signifying that, although they are rather tenderer than the generality of the moderately-tender tribe, they may also be raised by the same mode of culture; but that, where convenient to give them the culture of the most-tender kinds, as directed under that head, they may be raised to greater perfection.

This collection of Moderately-tender Annuals are raised, by sowing the seed in a moderate hot-bed, in March, or beginning of April; or, in want of a hot-bed, they may be sowed in a bed and pots of natural earth, under a frame and lights, or hand-glasses; or, in default of those, defended of cold nights with matts: but the plants will not be so forward for transplanting into the borders, nor flower so soon, as those forwarded in a hot-bed. However, in want of hot-beds, or the convenience of frames, glasses, or other means of occasional shelter, they may be mostly raised in a warm border, and in pots, sowed the latter end of March and in April, when the weather is settled in tolerably warm.

Observe, that, in whatever of the above methods they are raised, they are all to be transplanted in May, or beginning of June, when the weather is warm, into the beds, borders, or some in pots, finally to remain; and in which they will flower very ornamentally from June or July till October.

But where there is the convenience of a hot-bed, it is adviseable always to raise a principal supply by that means, to obtain them sooner of a proper size for earlier transplanting and flowering; and for which purpose the hot-bed may be made in March, or beginning of April, for a one, two, or three light garden frame, two feet or two and a half high in dung, earthed within the frame with light, rich, dry mold, six inches thick; or, in want of frames, earth the bed as above, and defend it with hand-glasses, or may be defended of cold nights with garden matts; sowing the seed each sort separate, either in small drills, or on the surface, and covered

ed in lightly with fine earth ; or, where there are any cucumber or melon hot-beds in cultivation, small quantities of these annuals may be raised therein, by sowing the seeds in pots ; or may be sowed on any spare or vacant end, &c. of such hot-beds, outside of the frame.

When the plants are come up, allow them proper admissions of fresh air every day, by raising or shoving down the glasses, one, two, or three inches, and give frequent gentle waterings ; and when they are advanced one, two, or three inches in growth, admit larger portions of air, to strengthen and harden them by degrees for pricking out : and sometimes, in the middle or latter end of April, and in May, in warm days, take the glasses off entirely.

Then, when the plants are grown two, three, or four inches high, proceed to prick them out, some either into another hot-bed four inches asunder, to forward them, or some into a bed of natural earth, under frames or hand-glasses, or protected with mats of nights and bad weather ; and the rest prick out in May, in open, beds, six inches distance ; or, in want of the above conveniences of hot-beds, frames, hand-glasses, &c. the whole may be pricked out in May, when warm settled weather, into beds in the full ground, or some planted at once into the borders, beds, &c. where they are designed to remain for flowering, giving water when pricked or planted out ; and to those pricked close in beds, may readily give shade of mats from the mid-day sun, till they take good root, and shew signs of renewed growth ; giving also repeated waterings to the whole, till that period.

Those pricked out, permit to advance in growth three or four weeks, or till the middle or end of May or beginning of June, then taking opportunity of showery weather, if possible, to plant them out finally, or perform it in an evening, taking up the plants with small balls of earth about the roots, and plant them in the borders, pots, and other compartments where you intend them to remain, disposing them in a varied order. The lowest-growing plants place towards the

front; the others plant more or less backward, in the borders, &c. according to their growth, in a somewhat gradual manner, to the tallest in the back part;—as for example, have the mignonette, ten-week's stocks, India pinks, small basil, &c. planted more or less forward; the China asters, capsicums, balsams, sultan flower, globe-amaranthus, large basil, dwarf African and French marigolds, &c. rather more towards the middle, in a diversified arrangement; and the large African and French marigolds, amaranthuses, chrysanthemums, marvel of Peru, Chinese holly-hock, scarlet convolvulus, and egg plant, should occupy the middle and towards the back part of the borders; also the love-apples and smaller gourd kinds, Patagonian cucumber, snake and cucumber-shaped melon: and towards the back parts, have the persicaria, tree amaranthus, tall palma-christi, tobacco, and some chrysanthemums; generally planting most of these sorts singly, or one plant in a place, two, three, to four or five feet asunder; or some sorts, as ten-week's stock, in particular, may generally be planted three together in small patches, and in pots in the same order, both that there may be a greater chance of having some with double flowers in each patch or pot, and that they may together make a more conspicuous showy appearance when in flower. The same may be practised, occasionally, with India pinks and China asters, &c. especially in capacious compartments; and the mignonette, being a small plant valuable for its odorous scent, should generally be planted towards the front of borders, in small patches, three, four, or five plants together, giving the whole water as soon as planted, and repeated every day or two in dry weather, till they take good root and begin to grow.

When they advance to full growth, give the large kinds support of sticks, and also the climbing and trailing kinds, as convolvulus, love apples, &c.

Generally, of the above annuals, plant a portion of the principal or desirable sorts in pots, either at once from the seed-bed, or removed therein with balls from the
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the pricked-out beds; such as balsams, ten week's stocks, mignonette, egg plants, tricolors, bicolors, globe amaranthus, tree amaranthus, scarlet convolvulus, fultan flower, marvel of Peru, African and French marigolds, China asters, &c. in order to remove occasionally in their pots, to ornament any particular compartments required.

All those in pots must be well supplied with water all Summer, in hot dry weather, which they will require every day, in the morning or evening.

As, in many places, the accommodation of hot-beds, frames and glasses, &c. are not conveniently attainable for raising the above class of tender annuals, the following principal sorts may be raised in natural earth, in open beds or borders, and in pots, *viz.* mignonette, ten-week's stocks, African and French marigolds, Indian pink, Chinese holly-hock, China asters, balsams, chrysanthemums, love apples, gourds persicaria, palmar-christi, calendula, tree amaranthus, all sowed in the latter end of March, or beginning or middle of April, in warm situations free to the sun; or likewise, in warm settled weather the middle or towards the latter end of April and beginning of May, the globe amaranthus, tricolors, bicolors, and any of the other sorts, may also be sowed in the same manner: all to be transplanted the middle or end of May or beginning of June, into beds, borders, or pots, as before directed.

Or where there is no garden, several principal sorts of the above tender annuals may be raised in small quantities, in pots, such as mignonette, ten-week's stocks, Chinese aster, African and French marigolds, chrysanthemums, balsams, Chinese hollyhock, persicaria, nolana, amaranthus, &c. sowing the seed in March or April, in pots of rich earth, placed in a sunny defended situation, and the plants transplanted into other pots, according to the foregoing directions.

Of the above class of annuals, the mignonette being desirable for its sweet scent, should generally be sowed and planted near the habitation, and in the borders adjoining principal walks, and in pots, to place in room windows,

windows, &c. and which may either be sowed in patches, to remain, or for transplanting four or five plants together in small patches, in beds, borders, or pots, or some may be sowed in large patches, or whole beds, to impart their odorous scent more copiously in a stronger fragrance. To continue mignonette in succession, sow two or three different times from February, March, or April, till June or July, or some may be sowed in August to plant in pots for late autumnal plants, and to stand the winter in a green-house, or apartment of a dwelling.

As the above class of annuals will flower from June till October, ripen seed, and then wholly perish, be careful to save seed of each sort for raising successional supplies the following year.

Therefore, in Summer and Autumn, according as the seed ripens, gather a sufficient quantity of the different sorts, and preserve them separate.

MOST-TENDER ANNUALS.

THIS class of annual flowers being mostly of a more tender nature than those of the two former, require to be sowed and raised in hot beds to obtain them in full perfection, and the young plants pricked in the same, or another hot-bed of larger dimensions, and continued therein till the end of May, or beginning or middle of June, by which time they will be advanced to a good size, some probably to a flowering state, and when the season will be favorably warm to admit of their being removed into the full air; as they are unable to bear it fully day and night before the commencement of warm settled weather. They consist of the following sorts, esteemed some for the beauty of their flowers, others for the singularity of their finely coloured leaves, and some for the curiosity of their fruit, &c. and other peculiarities of growth, &c.

AMARANTHUS

AMARANTHUS

- Tricolor, for the beauty of its three-coloured leaves
- Bicolor, for the beauty of its two-coloured leaves

— Tree Amaranthus

BALSAMINE, or Balsam

- Purple flowered
- Red

— Scarlet

— White

— Double striped

— Double scarlet

— Double purple

— Double red

BROWALLIA

— Low or hanging Browallia

— High or lofty Browallia

COCK'S Comb

— Dwarf purple headed

— Dwarf scarlet headed

— Dwarf buff-coloured

— Giant purple headed

— Giant scarlet

— Giant buff-coloured

— White flowering

— Striped headed

— Branching

— Spike flowering

CONVOLVULUS (scarlet)

DALEA

— Blue spiked

GLOBE Amaranthus

— Purple headed

— White

— Silvery

— Striped

— Spike headed

HUMBLE Plant, for the singularity of its leaves receding, and suddenly inclining when touched

ICE Plant, or Diamond

Ficoides, curious in its stalks and leaves, being overspread with chrystalline or icy-like globules

EGG Plant, or Melongena, singular in producing large egg-shaped fruit, white, purple, and very curious

— White fruited

— Purple

— Smooth stalked

— Thorny stalked, or mad-apple

MARVEL of Peru

— White flowered

— Yellow

— Red

— Purple

— White and yellow

— White and purple

— Purple and yellow

— Red and yellow

— Striped flowered

— Sweet scented

— Long flowered, having very long tubes

— Two-forked night-smelling

MARTYNIA

— Annual Martynia with a large red flower

MELON, Snake-shaped

- | | |
|-----------------------------------|----------------------------|
| —Cucumber shaped | tion of its leaves, which, |
| Both these sorts for the | when touched, quickly |
| singularity of their fruits | shrink, and all the small |
| STRAMONIUM | lobes contract |
| —Double purple flowered | —Annual, double yellow |
| —Double striped | flowered |
| —White | —Humble sensitive plant |
| —Lemon coloured | ZINNIA |
| SENSITIVE Plant, cu- | —Red flowered |
| rious in the sensitive mo- | —Yellow |

The above collection of Tenderest Annuals being curious in their beautiful flowers, foliage, and some particular singularities, mentioned under their respective names, they merit culture, as very desirable ornaments to the Flower-Garden.

They are all raised by sowing the seed in a hot-bed in March or April, and the young plants, when an inch or two high, should be taken up, and pricked either in the same, or a new hot-bed, under frames and lights, to forward them in growth, till the middle or latter end of May or beginning of June, then all, but the humble and sensitive plants, removed into the open air, some principal sorts planted in pots, the others transplanted into the borders, &c. or in want of hot-beds, or frames and lights, most of the sorts may be sowed in a small bed of natural earth, in a warm border, under a frame or hand-glasses, in April and May; or, in default of such glasses, they may be sowed in the latter end of April, or beginning or middle of May, in a warm border, without any protection, and planted out into borders, pots, &c. in June; though they will be inferior, and flower much latter, than those forwarded in a hot-bed, or under glasses; therefore, where convenient, it is most adviseable to sow and prick them in a hot-bed, &c. in which they will attain good perfection in growth, flowering, and other properties, by June; and continue flowering, in the different species, from June, July, August, till the approach of cold weather

weather in Autumn, then will wholly perish, never to flower again.

Observe, that of the above collection, the humble and sensitive plants should generally be retained always under glasses; not material to have a hot-bed after May, but kept either under a frame and lights, or in a greenhouse or glass-case, or any room windows within, of a dwelling-house, principally next the sun; for, if fully exposed to the open air and weather, they lose the sensitive property of their leaves.

To raise the above class of Annuals in full perfection, either make a small hot-bed of warm horse-stable dung, for a one or two-light garden frame about a yard high, in which to sow the seed, or in any cucumber or melon hot-bed that is in cultivation at the proper season, March, or beginning of April, and that there is room to place some pots of seeds; however, a small hot-bed made wholly for that purpose, will be most convenient: having light fine earth on the bed, five or six inches thick, either sow the seed in the earth of the bed, in small drills drawn with your finger, or on the surface, sowing each sort separate, and cover the small seeds only about a quarter of an inch deep, larger seeds more in proportion, or some may be sowed in pots, plunged half-way or more into the earth of the bed; and when the plants come up, admit air every day, by propping up the upper end of the glass an inch or two; give occasional very light waterings, keep the glass shut close of cold nights, and cover it with mats or straw litter; and, when the plants are advanced an inch or two in growth, draw up the strongest, and prick them, some in the same, or wholly into a new hot-bed, either for a one-light box, or of larger dimensions for a two or three-light frame, placing them four or five to six inches distance; or some may be pricked singly in small pots; giving water to the whole at planting, and shaded from the mid-day sun till they take good root; continuing them in this bed three or four weeks, or more, till they have advanced in growth, as to require more room; then, if some are thinned out with balls,

and planted in pots singly, and placed in another new hot-bed a foot asunder, it will forward them considerably, the others remaining in the pricked-out bed, being thinned as above, and the bed lined with some hot dung, applied to the sides to renew the heat, they will also advance freely in growth. Supply the whole with fresh air, and necessary waterings, according as the earth becomes dry.

When the plants of the larger growing kinds have advanced in growth upward to touch the glasses, the frame may be raised at bottom five or six inches to give a proper scope above to advance in height.

But when intended to draw any particular larger sorts to a tall growth, as the large cock's-combs, tricolors, bicolors, balsams, egg plants, &c. some of the strongest plants should be taken up with balls of earth, and planted in largish pots, one plant in each, and plunged in a hot-bed; and according as they advance in height to touch the glasses, the frame should be raised either by means of a post placed at each corner of the bed, or with some convenient props placed under the frame, and the vacancy at bottom defended with some garden mats, or thin boards; or for drawing these plants tall, a deep frame three or four feet behind by two or three in the front would be of much advantage in that business, that when the plants in the common frame are advanced to the glasses, remove that, and place the deep frame on the bed; or a drawing frame may be formed of two or three divisions, to place one upon the other, as the plants shoot in height; one division fitted for the glasses, and always placed uppermost upon the others.

Likewise, for drawing the above kinds of Tender Annuals to a large size, a glass case, with upright glasses in the front, and inclined sashes above, would be very convenient; making a hot-bed in a pit within, either of horse-dung or tanner's bark. If the former, lay some earth at top, five or six inches thick, in which to plunge the pots; and if the latter no earth will be required, but plunge the pots of plants immediately
into

into the bark: and in either of which beds, made in the above-mentioned glassiary, the plants will grow very prosperously, and run up tall and strong.

However, for the dwarf cock's-combs, &c. they may be continued in hot-beds, under any common frame, as they seldom grow more than from about six or eight to ten or twelve inches high.

Continue to supply the whole with admissions of fresh air daily, and proper waterings, and as the warm season advances in May and June, inure them by degrees to the full air, by raising the ends of the glasses considerably, and sometimes taking them off wholly.

Then, in the latter end of May, or rather the beginning of June, when warm settled weather, they may be removed out of the hot-beds and frames; placing the principal sorts in pots, to ornament any particular compartments; the others take up with balls, and plant in the borders or beds of the flower garden, give them water at planting, and afterwards occasionally, or every day or two, in dry weather, till they have taken good root, and began to advance in a fresh growth.

In their further culture, give the tall sorts support of handsome straight sticks, and to all those in pots, give frequent supplies of water, which, in dry hot weather, will be necessary every day, generally applying it in a morning or evening, that the moisture may reach the roots effectually before exhaled by the heat of the day.

As this tribe of annuals, like the two former, flower from May, June, and July, &c. till October, ripen seed, and then terminate their existence, you must be careful to save a proper supply of seed with which to raise a succession of plants next year.

The seed generally ripens in August and September; but as sometimes, if a cold wet Autumn, some of the more tender sorts produce it very sparingly; such as the cock's-combs, tricolors, double balsams, double stramoniums, &c. and of which it is proper to place some pots of best sorts in a deep frame, or two or more frames

frames placed one on the other; and the top defended with the glasses of nights, and rainy or cold weather, or placed in an airy glass-case defended with glasses above; and in either of which the plants will ripen seed in greater perfection and abundance than those fully exposed to all weathers.

BULBOUS-ROOTED FLOWERS.

A N D

Some principal Tuberous-rooted kinds, of the nature of Bulbs, by the leaves decaying when the plants have done flowering, and at that period admit of being taken up, and kept some considerable time out of the ground.

THIS tribe of flowers are all perennial, or of many years duration in the root, propagating and perpetuating their species by off-sets thereof, consisting principally of bulbous-rooted kinds, and some of the tuberous-rooted tribe, which, like the bulbs, lose their leaves and fibres when done flowering, and that being taken up at that period, admit of being kept two or three months, or more, out of the ground; but the bulbous kinds are considerably the most numerous, and most of which produce very ornamental flowers in long succession in the different species and varieties, flowering from February, March, and April, till October; and according as the different sorts have done flowering in Summer and Autumn, the leaves and stalks decay, and also the fibres of the roots, which having then terminated their year's growth, remain for some time in a dormant state, and which is the most proper period for removing or transplanting those kind of flowering plants, as also to propagate them by detaching the small off-sets from the main roots, either annually, or once in two or three years, especially when encreased by the off-sets into large bunches; and the roots may either be planted again directly, or in a month

month or two after, or, as being taken up at the above state of declined growth, they admit of being dried and housed till Autumn, September, October, or November, being the principal planting season, or a portion of some sorts may be retained out of the ground till the Spring, if thought necessary, for successional flowering, then in February, or early in March, wholly planted, all for flowering the ensuing Spring, and Summer. And of the bulbous kinds, there is a small tribe which flower late in Autumn, about September and October, and the leaves continue till April or May following, then decay, and which is the proper time for removing these sorts, where intended, both to separate the off-sets, and either to plant them again directly, or in June, July, or beginning of August at latest, to flower the same year, in Autumn, aforesaid.

As this class furnishes numerous very beautiful-flowering plants, both of the bulbous tribe, and some tuberous kinds, but most abundantly of the bulbous roots, they consist of roundish, globular, and ovalish bulbs, some tunicated, or of many involving tunics or coats, like the onion, others solid, and some composed of many fleshy squama or scales, imbricated, or placed over one another, as in crown imperial, white lily, martagons, &c. and the tuberous-rooted kinds consist of knobbed, solid, fleshy roots, and tubers, as in anemones, winter aconites, tuberous iris, ranunculus, some in a single knob or tuber, others of many small tubers connected at top, as in the ranunculus in particular.

They are mostly all of a hardy nature to plant in the open ground, in beds, borders, pots, &c. of many year's continuance in the root, which propagates abundantly by side off-sets annually, proper to detach in Summer, &c. when the flowers and leaves decay, either every year, or once in two or three years, as may be thought expedient or convenient.

All the different species and varieties are arranged in their proper families, in the following order:

ALLIUM

ALLIUM (Garlick tribe)
Moly, &c.

- Common yellow Moly
- White umbelled Moly
- Broad leaved Garlick
- Magicians purple Moly
- Roseous starry Moly
- Yellowish pendulous flowered garlick
- Canada bulb-bearing garlick or tree-onion, curious in producing many bulbs at top of the stalks
- Oleraceous bulb-bearing tree-onion
- Vineal bulbiferous Garlick
- Dwarf or bastard Moly
- Odorous or sweet-scented Moly
- Fading Narcissus-leaved garlick
- Bear's garlick, or ramsons

ACONITE (Winter) a diminutive tuberous-rooted plant, with a small yellow flower, appearing in January and February

AMARYLLIS, or Lily
Daffodil

- Yellow Autumnal flowering
- Atamascan Spring flowering
- Guernsey Lily
- Belladonna Lily

The last two of these

produce most beautiful flowers in Autumn, September, and October; and being somewhat tender, it is proper to give them occasional protection from cold, and great rains: and should be planted in a light sandy earth, in a warm border, or in pots, and defended under a frame in bad weather, and during the Winter, or pots placed in a greenhouse in that season, and when they flower

ANEMONE, tuberous-rooted plants, furnishing many varieties, producing very pretty flowers in March, April, May, &c. Consisting of two principal mother species

- Narrow-leaved, or Poppy Anemone
- Single large red flowered
- Double red, &c.
- Garden broad-leaved Anemone
- Red flowered
- Purple
- Crimson
- Scarlet
- Blue
- White
- Violet
- Rosy

Blue

- Blue and white
- Red and white
- Red, white, and purple

BULBOCODIUM

- Spring flowering

COLCHICUM, Autumnal flowering bulbs

- Purple flowered
- Red
- White
- Rofy
- Rofy variegated
- Variegated purple
- Yellow or Crocus Colchicum
- Double flowered
- Variegated leaved
- Spring flowering

CROCUS

- Spring flowering, several varieties, viz.
- Common yellow flowered

- Large yellow
- Blue
- Light blue
- White
- Cream coloured
- Scotch, black and white striped
- Cloth of gold; yellow and black striped
- Autumnal flowering

Crocus

- Blue flowered
 - Saffron Crocus
- CROWN Imperial
- Yellow flowered
 - Orange yellow
 - Red

- Reddish yellow
- Double yellow
- Double red
- Crown upon crown, or with two tiers of flowers
- Triple crown, or with three tiers of flowers
- Silver-striped leaved
- Gold-striped leaved

CYCLAMEN, (roundish tuberous roots)

- White flowered
- Red
- Purple
- Spring flowering
- Autumnal flowering
- Winter flowering
- Ivy-leaved
- Round-leaved

DAFFODILS

- Common yellow
- Long-tubed
- Double

FRITILLARIA, or chequered tulip; the flowers curiously chequered of different colours

- Common chequered flowered, purple
- Yellow flowered
- Dark yellow
- Black
- Umbel-flowering
- Persian Fritillaria
- Pyrenian

FUMATORY (bulbous-rooted)

- White flowered hollow-rooted
- Purple hollow-rooted

Red

- Red
- GLADIOLE**, Sword-lily,
or corn flag
- Common purple flower-
ed
- Flesh-coloured
- Red Major
- Variegated-leaved
- HYACINTH**
- Oriental Hyacinth; ma-
ny fine varieties of the
flowers; viz.
- Blue flowered
- White
- Red
- Blush or rosy
- Yellow
- Purple
- Dark-purple-blue
- Percelane-blue
- White with flesh-co-
lour eyes
- White with yellow eyes
- White with red eyes
- Double and single flow-
ers of each, with nume-
rous intermediate varie-
ties
- Musk hyacinth
- Grape hyacinth
- Deep blue
- Azure blue
- White
- Feathered hyacinth
- Tufted hyacinth
- Wild hyacinth, or Hare
bells
- Common blue
- White
- Red

- IRIS**, or Flower-de-luce
- Bulbous-rooted; many
varieties
- White, streaked with
purple
- Porcelain ground, streak-
ed with purple
- Purple streaked, of each,
many varieties
- Spanish Bulbous Iris,
many varieties
- Persian Dwarf Iris
- Striped flowered
- White
- Blue
- Crocus-rooted bulbous
Iris
- Dwarf blue Iris; one
flowered
- Purple blue
- Red
- Pale and white
- Small variegated
- Tuberous rooted, or
Snake's head Iris
- Florentine Iris; white
flowered
- Chalcedonian Iris, with
large black and white
spotted flowers
- JONQUIL**, See Narcissus
- IXIA**
- Crocus leaved, with a
large white flower
- LILIES**
- Common white lily
- Striped flowered
- Double flowered
- Pendulous flowered
- Striped leaved

Orange

- Orange lily
- Common orange coloured
- Purple
- Striped leaved
- Martagon lily; the flowers reflexed
- Purple flowered
- White flowered
- Canada Martagon; with bell-shaped spotted flowers
- Chalcedonian great scarlet Martagon
- Pompony Martagon
- Philadelphian small yellow lily
- Superb pyramidal lily; with large orange and yellow flowers; spotted with black

NARCISSUS

- Poetic or common white Narcissus
- Double flowered
- Single flowered
- Two-coloured Narcissus
- Hoop petticoat Narcissus
- Musk Narcissus
- Minor or small Narcissus
- Sweet scented Narcissus
- Polyanthos - Narcissus; several flowers on the stalk, from the same sheath
- Yellow flowered
- Gold-yellow
- Sulphur-colour

- White, with orange middle cups
- Yellow, with orange cups
- White, with citron cups
- With different varieties of each

JONQUIL, or Rush-leaved Daffodil; many flowers on the same stalk, from the same sheath

- Common yellow-flowered
- Large Dutch yellow
- Double-flowered
- Single-flowered
- Sulphur-coloured

PANCRACTIUM LILY

- Sea Pancratium, with a large beautiful white flower

POLYANTHUS - NARCISSUS—See Narcissus

RANUNCULUS: small grumous or fingered tuberous roots, consisting of many small tubers connected at top into a head

- Persian Ranunculus, with many varieties of flowers, viz.
- Red flowered
- Purple
- Black
- Crimson
- Flame-colour
- Violet-colour
- Rosy
- Coffee-colour

White

- White
- Olive-coloured
- Straw-coloured
- Yellow
- Gold-coloured
- Rosy, gold-striped
- Yellow, red-striped
- White, red and crimson striped
- White, spotted, with numerous intermediate varieties of various tinges and stripes
- Double-flowered of each, the flowers very full and beautiful
- Semi-doubles
- Turkish, or Turban Ranunculus; large flowers
- Bloody or scarlet flowered
- Red-flowered
- Yellow-flowered
- White

SNOW-DROPS, spring-flowering

- Common single-flowered
- Double flowered

SNOW-DROP Greater

- Spring flowering
- Summer flowering

STAR of BETHLEHEM

- Pyramidal great white
- Yellow flowered
- Pyrenian long-spiked whitish green
- Umbel flowering

TUBEROSE, tenderish, requiring to be planted in pots, and placed in a

hot-bed or hot-house, to have them flower in perfection; or some may be planted in pots in March or April, and placed under a frame, or in a warm border

- Common single white
- Double flowered

TULIP; consisting of large tall-growing kinds and dwarf sorts, &c. each many varieties of the flowers, viz.

TALL KINDS, or STANDARDS,

Consisting of tho with white ground striped with different colours, and yellow grounds variously striped; and also with white and yellow bottoms of one colour above, for breeders to break into stripes and variegations.

- White bottoms
- Black striped
- Brown striped
- Rosy striped
- Red striped
- Violet striped
- Purple striped

Numerous varieties of each

- Yellow bottoms
- Black striped
- Purple striped
- Orange striped
- Red striped

Violet

- | | |
|--------------------------|--------------------------|
| —Violet striped | flowering |
| —Brown striped | —Yellow |
| —Olive striped | —Yellow and red flam- |
| Many varieties of each | ed |
| —One coloured for break- | —White and red striped |
| ing into stripes | —White |
| —White bottoms | —White and Violet |
| —Purple | —White and purple |
| —Black | —White and rosy |
| —Rosy | —Red |
| Violet | —Rosy |
| —Brown | —Flame colour |
| —Purple-black | —Variegated |
| —Red | Many varieties of each |
| —Grideline | —DOUBLE TULIPS, |
| —Violet brown | Rose-form |
| —Yellow bottoms | —Yellow |
| —Reddish brown | —Yellow and red |
| —Brown | —White and red |
| —Purple | —White and rosy |
| —Black | —PARROT TULIPS, |
| —Rosy | the petals of the flower |
| —Crimson | long and hooked |
| —Orange | —Yellow flowered |
| —Red orange | —Red |
| —Olive | —Yellow and red-striped |
| —Coffee colour | —Orange colour |
| DWARF SORTS ; early | —Yellow sweet-scented |

Of the above, the following are Autumnal Flowering Bulbs, or such as flower late in Autumn, about September and October ; and the leaves coming up soon after, continue till next April or May, then wither and decay ; and the roots lose their fibres, and decline growth for some time, and which is the proper period for removing the bulbs, when required ; should be planted again in July or August, to flower the ensuing Autumn of the same Year.

AMARYLLIS,

AMARYLLIS, the Au-	BELLADONNA LILY
tumnal flowering	GUERNSEY LILY
COLCHICUMS	PANCRATIUM, Sea
CROCUS, Autumnal blue	Daffodil.

The above collection of bulbous and tuberous-rooted flowers are great ornaments to the Flower Garden, as in the different species and varieties they continue flowering, in succession, from January, February, or March, till October, as formerly observed; then, in all the Spring and Summer flowering kinds, the stalks and leaves decay, but the roots remain in duration from year to year, and flower annually at their due season, either in the same roots, or in some sorts, as in tulip, &c. the main bulb wholly perishes, and is succeeded by the principal off-set thereof, previously emitted from the bottom, encreasing to full size, becomes the main root for next year's flowering: and thus the species is perpetuated, in a perennial state; and which, and all the other bulbous and tuberous kinds, propagated plentifully by small side off-sets of the mother root, less or more every year which may be separated from the parent bulb when taken up after flowering, either annually, as is adviseable in all the more curious and capital sorts of hyacinths, tulips, anemones and ranunculuses, &c. or, the others once in two or three years, when the off-sets are considerably encreased; and the most proper time for doing this, is soon after the roots have done flowering, and the leaves and stalks begin to decay, as the bulbs, &c. have then done growing for a short time, and admit of removal without the least impediment to their future flowering the following year; and which period of rest or dormant state is also the only proper time for taking up all or any of the other sorts of bulbs and tuberous roots, where intended, agreeable to the foregoing intimations, both in order to separate the encreased off-sets, and to replant the main roots again in fresh-prepared beds, borders, and pots, either soon after removal, or rather mostly dried and

and housed to keep for planting in the following Autumn, or some retained for Spring planting, though, in the scaly bulbs particularly, it is advisable to replant them mostly in Autumn; and the small detached off-sets are advised to be planted in nursery-beds, soon after separated, or early in Autumn: and these, after having one or two years growth, will be of proper size for full flowering.

The roots of all the sorts may be procured for planting at the nurseries and seed-shops; and having obtained a few of each, or of the approved or desirable sorts, they will soon multiply by off-sets to encrease the stock.

The principal season for planting them, is the latter end of Autumn, from the middle or end of September, till November or December; though October and November is a successful time for the general planting; or most of the sorts will also succeed by early Spring-planting, not later than February, or beginning of March, though they will seldom flower so strong the same year as those planted in Autumn, especially in many of the bulbous kinds; and in some sorts, as most of the scaly bulbous tribe, as crown-imperial, and all the lily kind, being composed of many fleshy succulent scales, which, if the bulbs are retained long out of the ground, are generally apt to shrink and waste, it is most adviseable to plant them soon in Autumn.

But in the anemones and ranunculuses it is proper to plant a portion in Autumn, in October or November, for early Spring flowering, and a principal supply planted in February or March, for a succession and principal show in May; or a small portion may also be planted in April, for late flowering in June.

As to the order of planting the various sorts, they may, in the greater part, be planted in the common borders or beds in assemblage with other flowering plants; or in the capital tulips, hyacinths, polyanthos, narcissus, ranunculuses, anemones, &c. it may be proper to plant a collection of each in beds by themselves,

selves, each sort separate, in order both to have occasional protection in severe weather in winter, and to give protection by an awning of mats to the flower when in full blow, to defend them from the hot sun and great rains, to preserve them longer in perfection, as well as to have the opportunity of beholding a grand blow of each sort together. Any of the other desirable sorts may be planted in beds in the same order.

In planting them in the general flower borders, place the low-growing sorts forward, such as crocuses, snow-drops, winter-aconite, anemones, ranunculuses, &c. The others disposed less or more towards the middle and back part, according to their size of growth; and generally plant the smaller and middling growing sorts in little clumps, three to four or five roots together, in a small patch, each sort separate, in which they will make a more conspicuous appearance when in flower, having the clumps three, to four, five, or six feet distance, in a varied order; but the large roots of lilies, martagons, crown-imperials, &c. should be planted singly, for as these produce tall stems, large flowers, many on each stalk, single plants will appear sufficiently conspicuous in their flowering.

The planting in the borders may be performed, in the small and middling roots, with a thick blunt-ended dibble, inserting them two or three inches deep, making a hole for each root, sufficiently wide all the way down to admit the root clean to the bottom; or larger roots may be planted with a garden trowel, opening a hole therewith for each root, to admit them three or four inches in the ground; covering the whole in with the earth a regular depth.

When designed to plant in beds any particular sorts by themselves, allot them a lightish moderately dry soil, well digged, the earth broken fine, and form the beds three and half or four feet wide; and in which plant the roots in rows lengthways, six to nine inches asunder for tulips and hyacinths, &c. by the same distance in each row, and three or four inches deep: or
smaller

Smaller bulbs, and the anemones and ranunculuses, may be planted only six inches asunder, and not more than two or three inches deep. The planting may either be effected with a thick round-ended dibble; or draw drills with a hoe, the depth as above, placing the roots in the drills, and earth them over; or, for the principal sorts, the earth may be raked off the bed evenly three or four inches depth into the alleys; then set the roots on the surface of the bed at regular distances, pressing each a little into the ground, and then with the spade spread the earth out of the alley evenly over the roots an equal depth; and in either method of planting, when finished, rake the beds even, drawing off all hard clods and stones, forming a smooth regular surface.

Any desirable sorts may also be planted in pots, either to place in the garden, or to flower in the apartments or windows of a dwelling-house, or in court-yards, balconies, &c. where there is no garden; such as crocuses, hyacinths, dwarf tulips, polyanthos-narcissus, common narcissus, jonquils, bulbous iris, dwarf iris, ranunculuses, anemones, &c. as also to plant in pots, to introduce in a hot-house or green-house, or in hot-beds in winter, for early flowering.

As to culture after planting, the principal care is when the plants are come up, to keep them clear from weeds during their growth and while they are in flower; and if any tall sorts are top-heavy, support them with handsome straight sticks, one to each plant, and tie the stems thereto in a neat manner.

Or to those planted in beds, of the more curious hyacinths and tulips, &c. occasional protection in severe frosts, snow, and other bad weather, in Winter and early in Spring, will be of advantage; as also when they are in full flower, if they are shaded with mats from the sun in the heat of the day, and from heavy rains, it will preserve them longer in beauty: and for which protection, the beds may be arched over with hoops or rods, low for the Winter protection, but when in flower, the arching should be three or four

four feet high or more; and have large garden mats to spread over, as occasion requires.

All the sorts will flower the ensuing Spring, Summer, and Autumn, after planting. Some will begin flowering early in the Spring, January, February and March, such as the Winter-aconite, snow-drops, crocuses, cyclamen; others in April and May, as anemones, ranunculuses, daffodils, crown-imperials, tulips, hyacinths, dwarf Spring iris, &c. and these will be succeeded by others in June, July and August, and the autumnal bulbs in September and October.

According as the different sorts finish their flowering in their respective seasons, the stalks and leaves will decay, and as the roots then decline growth for a short time, and which, as before observed, is the only proper period for taking up the roots where intended, either every year, to separate the off-sets, and new-prepare the beds or borders, for replanting the roots again the following Autumn, or some sorts soon after, especially the scaly bulbs of lilies in particular, or once in two or three years, when encreased considerably by off-sets; though it is adviseable in the principal fine varieties of hyacinths, tulips, polyanthos-narcissus, anemones, ranunculuses, or any other capital sorts, to take up the roots annually at the above-mentioned period of rest after flowering, both to separate the off-sets for encrease, and to have the opportunity of fresh digging and preparing the beds, borders, &c. and that by being cleared from the off-sets, and replanted in fresh-prepared earth, they will flower stronger, and in greater perfection, the following season. However, in the general supply of common bulbs, &c. they may either be taken up as above annually, or remain two or more years, and removed occasionally, when multiplied by off-sets, into large bunches, and that the off-sets are wanted for farther encrease, or when it may be intended to transplant the roots from one place to another, &c.

Therefore observe in all removal of bulbs, and the tuberous-rooted kinds before-mentioned, as anemones, ranunculuses, tuberous irises, &c. it should be performed

formed principally only at the above period of the decay of the leaves after flowering, and the roots done growing, or soon after, before the bulbs or roots emit fresh fibres to proceed in a new growth, after which it is improper to remove bulbous roots, so far as they then having in a manner formed the future flower bud, it may impede or weaken their flowering the year ensuing, or in some sorts would prevent their flowering entirely the year following.

However, if on particular occasions any bulbs, &c. are obliged to be removed in an advanced state of after-growth, either in Summer, Autumn, or Spring, it is adviseable to have them planted again almost directly, or very soon after removal; for when taken up in a state of growth, they will not keep so well out of the ground, to flower in good perfection, as when removed soon after the decay of the leaves; and in several sorts would prevent their flowering the following season, as before intimated; on which considerations, when any are occasionally removed at an improper season, they should be planted again as soon as possible.

According as you take up the different sorts of bulbs, &c. in Summer, Autumn, &c. as they go out of bloom, and the leaves decay, or on other occasions, should detach all the small off-sets from the main or parent roots; and generally separate the smaller off-sets from the larger, the former to plant again soon after in beds, the others may be kept longer if thought convenient, or the largest retained for Autumn planting.

Then the main bulbs taken up as above at the proper season, at the decay of the flowers and leaves, as also the large off-sets, may be spread to dry moderately; afterwards cleared from earth, and loose outer skins, the decayed stalks, leaves, and fibres at the base of the root, and then deposited in boxes or baskets, or upon shelves in some dry apartment to keep till Autumn for replanting again at that season, in October or November, or occasionally in December, if dry open mild weather, or some kept for Spring planting, where not convenient to plant the whole in Autumn, as also to obtain

a successional late bloom, after that of the autumnal-planted bulbs ; though it is proper to remark, that some sorts will succeed by late or Spring planting better than others, so as to flower the same year in their proper season, such for instance, as crocuses, hyacinths, jonquils, narcissus, Persian iris, as also anemones and ranunculuses, better than tulips, lilies, &c. but all Spring planting of bulbs, and tuberous roots should generally be completed in February, or early in March, as formerly observed.

Or anemones and ranunculuses in particular will succeed by late Spring planting in March and April for late successional flowering the same year in May and June.

Likewise tuberoses will succeed by planting in March, April, and May, planting some in each of those months to succeed one another in flowering in Summer ; but are commonly planted in pots one good root in each, and placed in a hot-bed or hot-house, as being tenderer than the other sorts of bulbs, at least will not flower so forward, nor in equal perfection in natural growth, as when assisted by the above aids of artificial heat.

However, all other bulbous and tuberous roots in the foregoing list that remain out of the ground till the Spring should be planted as soon as convenient in that season, both to have them flower the same year in tolerable perfection, or those that may not flower, it will preserve the roots to gain strength for future flowering, and to afford an encrease by off-sets.

Or the large bulbs of white lilies, martagons, and other lily kinds, and others of the squamous rooted tribe, may be planted again soon after removal, or early in Autumn, or at least before Winter, that they may more certainly flower in good perfection the following year ; or, where necessary to retain these sorts longer out of the ground, in the house, for planting at any particular future occasion, it will be proper to keep them very close from the air, or lay them in a little very dry sand or moss, to preserve their succulent fleshy scales from shrinking.

The

The off-sets of the different sorts of bulbous roots, anemones and ranunculuses, &c. that separated from the main roots, when taken up as above soon after flowering, should be kept each sort by themselves, the small ones sorted from the large, and preserved to plant, for propagating or encreasing the stock of the respective species and varieties; and the small ones planted soon after in beds, in drills longways four inches asunder, and two or three inches deep, to have one or two years growth, or till of a proper size for full flowering; or the large off-sets that are of proper strength to flower tolerably strong next year, may be kept for planting in Autumn, in assemblage with the other flowering roots, in borders and beds: though the lily off-sets, or other scalyrooted kinds, are adviseable to be planted soon after separation from the parent bulbs, as they do not keep so well out of the ground as the tunicated and solid bulbs.

But in removal of bulbous roots on any particular occasion after having commenced a renewed growth, that as when they are removed in that state, they will not admit of keeping out of the ground without shrinking and exhausting in their substance and strength: it is not therefore adviseable to dry and house them for future planting, as practised for those taken up at the proper time, in their dormant state, in Summer, &c. shortly after they have done flowering, but should be all planted again, both main roots and off-sets, soon after being removed.

The propagation or method of encreasing all the approved sorts of bulbous and tuberous roots, is by the off-sets or young side bulbs, &c. emitted annually from the main ones, and by which they, in most kinds, propagate in great plenty, proper to take off in Summer, &c. when the roots are taken up after they have done flowering, either every year, or once in two or three, according as they have encreased more or less; though the more curious varieties of hyacinths, tulips, polyanthos-narcissus, jonquils, Persian and other bulbous irises, anemones and ranunculuses, &c. may generally

be taken up, and the off-sets separated annually, both to obtain the greater encrease, and that they may not impoverish the parent bulbs; but in most of the common sorts of these and others, they may remain two or three years, or till more considerably multiplied; when, as the off-sets will then be crowded, press against and impede the growth of one another, as well as that of the parent roots, they should be separated: and this, in all cases, should be generally performed in the proper season, by taking up the roots soon after the decay of the flowers, as already explained, and from which detach the progeny of off-sets, to plant, the smaller ones in beds by themselves till of proper size to flower; or some larger off-sets will flower in tolerable perfection the year following.

The separated off-sets may either be planted soon after separation, or within a month or two at furthest, especially the small ones, that they may not waste and shrink in substance too much to a weakly state, or larger off-sets may be kept for Autumn planting: all of which, especially the smaller, to be planted in beds, in rows longways three or four inches asunder; generally drawing drills three inches deep, place them in the drills two or three inches distance, and earth them over; and when they have had one or two years growth, to acquire an eligible size for flowering in tolerable perfection, they may be taken up at the decay of their leaves in Summer, for planting in beds and borders, &c. at proper distances, as directed for the full flowering roots: or large well-grown off-sets, separated as above, may be planted at once in Autumn, &c. as full-flowering roots, in the principal borders and beds, to blow the following season of Spring and Summer.

The separation of off-sets may, in some large kinds of the bulbous tribe, be occasionally performed without removal of the parent bulbs, such particularly as white and orange lilies, martagons, and other lily kinds, and crown imperials; when grown into large bunches, the outward off-sets may readily be detached in these large sorts, without disturbing the main roots, either soon after

after the decay of the flower and stalks, as the most eligible and successful period, or at any other opportunity. But if done while they are in growth, or after they have emitted fresh fibres in the earth, it is advisable to plant them again as soon as possible; or even of those detached at the proper season, of these kinds of scaly bulbs, it would be best, in the smaller off-sets particularly, to plant them soon after separation, or the whole planted early in Autumn.

To obtain new varieties of bulbous and tuberous-rooted flowers, it is effected by raising them from seed, especially as from that of some particular sorts, the seedling plants vary exceedingly in their flowers, probably not one exactly like those of the mother root, but differ in the colours, manner of their stripes, tinges, and variegations, &c. in many various ways, and among which new sorts may occur that possess peculiar good properties different from all the preceding parent varieties; and thus numerous new flowers of the respective kinds are annually acquired by curious florists, who have patience enough to await their flowering, as the raising by seed is a very tedious process, for from the time of sowing, it will be three or four to six or seven years before the roots begin to flower, more particularly hyacinths and tulips, and seldom any sorts in less than three or four years; and in this business, the Dutch florists are famous, who raise more new varieties than all Europe besides, though many English florists also raise them in tolerable perfection and abundance; the business appears tedious at the first set off; but by continuing to sow some annually, the plants of the different sowings, after the first four, five, six, or seven years, come into flower accordingly, some every year in successional order, and thereby always have a succession of new flowers appearing; and among the professed florists, all the new flowers possessed of eligible properties according to the etiquette of the science; are formally named, generally that of some great personages, or sometimes of the person who raised them, or places where first raised, and various fancy names; and with which the flower cata-

logues abound to the amount of many hundreds of varieties in the same species, as for instance in the oriental or common garden hyacinth the varieties are without end, the same of the tulip, anemone, ranunculus, &c. as new ones are annually occurring.

That when intended to save seed of the desirable sorts for sowing, permit some flowerstalks after the decay of the flower, to remain till the seed is ripe in Summer and Autumn; then gather it in a dry day, rub it out, dried, and put up close, to sow soon after, or next Spring.

The sorts which are the most commonly raised from seed in order to gain new varieties, are principally hyacinths, tulips, ranunculuses, and anemones, as those are remarkably prolific in new flowers; several other sorts, which, though not so sportive as the above, also often produce many pretty varieties from seed, as fritillarias, crown imperials, martagons, polyanthos-narcissus, bulbous irises, colchicum, &c.

All the sorts ripen seed in Summer and Autumn, and which may be sowed soon after it is ripe, or in August or September, but not kept longer than the following Spring; the sowing is performed in beds, borders, pots, or boxes of light earth, or that of a sandy loamy nature; moderate supplies may be sowed in large pots, or in boxes of proportionable size, filling them near the top with the above earth or compost, sow the seed on the surface, and covered evenly with fine mould a quarter to half an inch or inch deep, according to the size and substance of the different sorts of seeds; then the pots, &c. may be removed to a shady border all Summer, and in the full sun in Winter, or larger quantities may be sowed in beds, or an easterly border, or if sowed in an open bed, give a shade of mats from the mid-day Summer's sun in dry hot weather, giving sometimes in that season moderate waterings and shade.

They will come up very slender the first year, and the bulbs will be small: permitting them wholly to remain till the second, only observing in Summer or Autumn, when the leaves decay, spread a little fine mold thinly
over

over the surface of the earth of the pots or beds, &c. it will add to the depth over the young bulbs, and be a small fertilizing improvement to the soil, and encourage the growth of the seedlings, which, when a year or two old, the bulbs of some advanced state, they should be taken up in Summer when the leaves decay, the large separated from the smaller, and directly, or soon after planted in beds, in small shallow drills, three or four inches asunder, and two deep, placing the bulbs, &c. in the drills one or two inches asunder, or very small ones may be scattered thicker, covering them over with the earth the above depth, and in which beds permitted to have one or two years growth, spreading half an inch or inch of earth over the surface in Autumn, and when the leaves decay in Summer take up the larger roots, and replanted at wider distances; the others in their advanced growth transplant in the same manner in beds to remain till they attain a flowering state, which in some sorts as hyacinths and tulips, will be five, six, or seven years before they arrive to that perfection, anemones and ranunculuses, and some others will begin to flower in half that time, and at which period of flowering, those producing good flowers of new varieties should be marked, in order to be taken up when the flowering is past, and the leaves decaying, for planting separately in beds, borders, &c. as already directed for the full-flowering roots; and there to be increased by off-sets to multiply the stock, permanent in their respective properties of their flowers.

But as in tulips in particular, they being not only generally the longest before they flower, sometimes six, or seven, or eight years before they blow in tolerable perfection, and then being principally of one colour, it will often be one, two, or three years more before they break into stripes and variegations of different colours; and in which state of single flowers, they by the florists are denominated breeders till they break into stripes, &c. that to assist their breaking, the planting them in a light sandy poor soil for a year or two, or as required, will promote it much sooner, and more effectual than in a

rich earth ; and when they are well broken into stripes of different colours, they may then be planted and managed in the common way, in any beds, borders, &c. of the flower garden ; and the different varieties propagated by off-sets to encrease the desirable sorts continuing permanent in the properties of their respective flowers as before observed.

Thus having raised and obtained a supply of new varieties of the afore-mentioned flowers, or of any particular species thereof, the new sorts will propagate freely by the off-sets of the root, and all the off-sets and their progeny will continue to produce flowers constantly the same in every particular as those of their respective parent variety, and encrease annually to a large stock of each sort.

That in the propagation of bulbous and tuberous roots by the off-sets, if your stock is encreased more than is necessary in your own garden, they may be disposed of to the seeds-man either for money, or in exchange for other varieties, or any kind of garden seeds, &c.

Blowing particular Sorts early, in Water-Glasses, Pots, &c.

Several sorts of bulbous and tuberous roots may be blowed in root water-glasses, and in pots and boxes of earth, in the apartments of a house, placed in the windows, and on chimney-piece shelves, &c. such particularly as hyacinths, early dwarf tulips, polyanthos-narcissus, bulbous irises, Persian iris, dwarf tuberous iris, Florentino iris, Dutch jonquils, colchicums, fritillarias, crocuses, and anemones and ranunculuses, planted any time from October, November, or December, to the end of February, and will all flower very agreeably in Winter, or early in Spring : or to have them flower as early as possible, some glasses or pots of the roots may be placed in a hot-house, any time in Winter, to blow in that season, and in the early Spring months :

months: or pots of roots placed in a hot-bed in January and February, they will also blow early.

To blow them in water glasses, some roots may be placed therein every month, from November till March, to have a succession of early flowers in Spring, from January till April or May. The glasses or bottles for this purpose are sold at most of the seed-shops and nurseries and at all the glass warehouses, at five or six shillings per dozen; are of an upright somewhat tapering form, six or eight inches high, with a wide concave mouth at top to contain the root, one for each bottle; the concavity of the mouth made larger or smaller, in different glasses, suitable to the sizes of the different sorts of bulbs.

The sorts of bulbs as are principally raised for blowing in glasses, are hyacinths, early dwarf tulips, large Dutch and common jonquils, bulbous and tuberous irises, polyanthos-narcissus and other narcissus kinds, Persian iris, dwarf iris, large Scotch and other crocuses; and as to anemones and ranunculuses, they are not so well adapted for glasses as the bulbous and large roundish tuberous-rooted kinds, but will succeed very well in pots of earth.

The bulbs, &c. may be placed in the glasses in any of the Winter and early Spring months, from October, November, or December, till the end of February or beginning of March.

For this purpose chuse the largest sound roots of the sorts intended, examining that the base, or part where the fibres are emitted, is free from blemish, and appears firm and sound, not liable to rot in the water when placed in the bottles; and which should be particularly observed in the hyacinths, that they may more certainly flower in proper perfection.

Fill the glasses with soft water of a river, pond, cistern, &c. or rain water, raising the water up within the concavity of the mouth, in which to immerse the bottom of the root a little in the water; then place one root in each glass, with the bottom touching the water, or a little immersed therein, as just above observed; and

place the glasses with the roots in any warm window in a room, if where the sun comes it will be of greater advantage; or some may be placed on shelves of a light room, or the mantle-shelf of a chimney-piece of any sitting room, or any other shelves where there is plenty of day-light, and can have air admitted: or to have some flower as early as possible of the desirable sorts, the glasses may be placed in a stove or hot-house, or in a hot-bed under frames and lights.

The roots will soon send out strong fibres down into the water, and shoot above; and the only culture they require in this growth is to admit fresh air occasionally in mild days after they begin to advance in the top shoots, by opening the window or door a little in the middle of the day, and to change the water when it becomes foul, or fetid, once in a week, or ten or twelve days, or a fortnight, as it may seem necessary, pour out the old water, and filling the glasses again with fresh, immediately and directly replace the roots in their proper position.

They will thus shoot strongly below and above; and produce their flowers in very good perfection; observing in those of tall growth, or others with large flowers, top heavy, to give them support of straight sticks, one to each stem, either placed in a small eye or hole which is sometimes made on one side of the water glasses, or by means of wire, or small slips of lead, or in default of these conveniences, slit the end of the stick, and by which fix it on the edge of the glass as well as possible; and in either method tie the stem of the flowers thereto in a neat manner.

Sometimes for blowing in water, a small cistern is made of lead, wood, china, or of the common earthen ware kind, furnished at top with a lid or cover perforated with round holes to admit the bottom of the roots, filling the cistern with water up to the holes, then place a bulb in each, the bottom touching the water, they will grow and flower as in the glasses, though for general practice of blowing in water, I would principally prefer

prefer the glasses, as the most convenient, cleanly, and effectual.

To flower the bulbous and tuberous-rooted kinds in pots or boxes for early flowering, in the apartment of a dwelling-house, or in a hot-house or hot-bed, for earlier blowing, they may be planted therein, either in Autumn, about September, October, November, or any of the Winter or earlier Spring months, as before observed for the glasses; the pots may be of smaller or larger sizes, to contain one, two, to three, four, or more roots together; or have neat boxes sixteen or eighteen inches long, eight or ten wide, six inches depth; filling the pots or boxes with any lightish dry earth; or occasionally with sand: plant therein any of the kinds of bulbs and tuberous roots before mentioned, and of anemones, and ranunculuses, one, two, to three, four, or five roots in each pot, according to the size both of the pots and respective sorts of roots; more in proportion in the boxes; placing the roots three, four, or five inches asunder, and inserted only a little way over the crown; an inch depth is sufficient: and place them in a warm room window where there is the greatest benefit of the sun and light, and opportunity of admitting air in fine weather to strengthen their growth more effectually.

They will require to have air occasionally in mild weather, when they begin to shoot, by the door or windows moderately opened; and give also gentle waterings when the earth becomes dry; but more freely after the roots begin to grow than before; giving it, however, always in great moderation, just to have the earth in a small degree moistish; and according to the warmth of the room, or temperature of the weather, will require small supplies twice, or probably sometimes thrice a week.

Or where there is convenience of a hot-house, pots, or boxes of the above kind of roots may be introduced therein any time in Winter, from November till February, for quicker and earlier flowering; or in any forcing apartment, hot-bed, &c. under glasses; but more successfully in a bark hot-bed than that of dung; and in a hot-

a hot-house, or pine-apple stove, &c. they will grow and flower freely with much less trouble and care than in hot-beds under frames and lights; supplying the plants with light waterings when advancing in growth, and give air to those in the hot-house, only in common with the other plants of that apartment, and in hot-beds under frames, admit air in temperately mild days by tilting or drawing down the glasses one, two, or three inches for a few hours, or shut close when the weather changes cold.

By the above aid of a hot-house, &c. or hot-bed, they may be obtained very early in flower, in January, February, &c. or even in Winter in a hot-house, by early planting in Autumn, and placing the pots in the house in October, November, or December; or placed occasionally in a fruit forcing-house, in January or February for early Spring flowering.

According as those in the pots or boxes are done flowering, they should be removed to the full air, if you wish to save the roots in as good condition as possible, and when the leaves and stalks decay, the roots may either be taken up and managed as those of the natural ground, or may remain a year or two in the pots, adding some fresh earth to the tops in Autumn and Spring; but after twice flowering they should be removed, in order to separate the off-sets, and to replant them in beds, pots, &c. of fresh prepared earth.

PEREN.

PERENNIAL FLOWERS,
 OF THE
 FIBROUS and FLESHY-ROOTED TRIBES,
 FOR THE
 FLOWER-GARDEN AND PLEASURE-
 GROUND.

THE PERENNIAL FLOWERING PLANTS of this division, consisting of numerous genera, species and varieties, are all of the hardy herbaceous tribe, and of the fibrous and fleshy-rooted kinds, and such as grow freely in the open ground; proper to ornament and diversify the flower borders, beds, &c. of the flower-garden and pleasure-ground, all perennial, or of several or many year's duration, or continuance in the root, which, in the greater part, send up new flower stems annually in the Spring, for flowering the same year in Summer and Autumn, producing, in numerous sorts, very beautiful ornamental flowers, and when these decay the stalks or stems mostly die down to the ground, or from whence they originate, and, in many sorts, also the leaves; in others the leaves continue verdant; and have also abiding stems of a branchy growth, continuing Summer and Winter, as in wall-flower, stock-gilliflower, &c. which, however, seldom in the same individual remain longer than two years before they dwindle to a weakly declining state, more of
 a biennial

a biennial than a perennial nature; though, as the double wallflowers particularly are multiplied and continued perennial, both in root and top, by raising them from cuttings of the top shoots, they, and some others of a similar nature, are arranged here among the perennials, in which the same root continuing, and in most kinds multiply by off-sets, &c. they principally renew their flower stems annually, as above intimated, and propagate by seed, slips, off-sets, parting roots, and other different methods, as hereafter shewn.

They consisting principally of fibrous-rooted plants, the roots are composed of many fibres, which, in most sorts, are small and thread-like, others thicker and more fleshy, some with long fleshy fangs; and there are also many tuberous-rooted kinds, the roots being, in some, of a thick knobby fleshy substance, sometimes only in one or two tubers, roundish or oblong, &c. and in others of several together, either in a loose cluster, or some closely connected in a head; and by off-sets of the roots, numerous sorts are propagated.

In their general growth, they are of various structures and dimensions, from two or three inches to eight or ten feet, in the numerous different genera and species; the greater part upright, many of a trailing growth, others climbing, either by tendrils, or in a volubitate twining order, displaying a vast variety in their different growths, foliage, flowers and fruit, &c. and all of a hardy nature, to grow in the open ground, in beds, borders, and some occasionally in pots, as may be required; and of which numerous sorts are very desirable ornaments for adorning the Flower Garden and Pleasure Ground, flowering in succession, in the different species and varieties, from January or February till November; and, as before observed, are raised by various methods of propagation, such as many occasionally by seed, and the greater part also either by off-sets, suckers, parting the roots, slips, cuttings, layers, pipings, &c. as hereafter explained: and once raised, the same plants continue and encrease by the root, and flower annually.

As

As this tribe of hardy perennials consist of many genera or families, and most of the genera furnishing different species, less or more, all the species are disposed in their proper families, each family or genus distinguished by its botanic and English name, with the proper name of each species and variety, as in the following arrangement :—

Acanthus (BEAR'S BREECH)	some
— Soft or smooth	Acorus (SWEET RUSH)
— Thorny	Actea (HERB CHRIS- TOPHER)
— Most-thorny	— Spiked flowering
Achillea (MILFOIL, or YARROW)	— White berried
— Common, with red flow- ers	— Racemose flowering
— Lavender-cotton leaved	Adoxa (HOLLOW- ROOT)
— Hoary yellow	Agrimonia (AGRIMO- NY)
— Downy	— Common
— Falcated leaved	— Agrimonoide, or Three- leaved
— Silver leaved	— Odorous
— Ægyptian	Agrostemma (ROSE CAMPION)
— Odorous	— Common coronated
— Noble Milfoil	— <i>Red flowered</i>
— Double Sneezewort	— <i>White</i>
— Sweet Maudlin	— <i>Double</i>
— Cretan Milfoil	— Flower of Jove, or um- bellated
— Long, or Fever - few leaved	Ajuga (BUGLE)
Aconitum (ACONITE, or Wolf's Bane, Monk's Hood, &c.)	— Eastern
— Common early blue	— Pyramidal
— Yellow	— Creeping
— Variegated	Alcea (HOLLYHOCK)
— Pyrenean fennel-leaved	— Rosaceous, or common round-leaved
— White	— <i>Rose-coloured flowered</i>
— Salutiferous, or whole-	<i>Yellow</i>

- *Yellow*
- *Red*
- *Sulphur-yellow*
- *Dark-red*
- *Buff coloured*
- *Brown*
- *Crimson*
- Fig-leaved, in varieties as above.
- Alchemilla (LADY'S MANTLE)
- Common
- Hairy
- Five-leaved
- Aletris (UVARIA)
- Althæa (MARSH-MALLOW)
- Common
- Hemp-leaved
- Amni (BISHOP'S WEED)
- Glaucous-leaved
- Anchusa (BUGLOSS)
- Oriental
- Evergreen
- Andryala (DOWNY SOW-THISTLE)
- Alyssum (ALYSSON, or MAD-WORT)
- Mountain
- Saxatile or Rock, yellow
- Hoary
- Halimus-leaved, sweet
- Bladder-podded
- Hyperborean
- Cretan
- Anemone (ANEMONE)
- Garden, broad-leaved; many fine varieties.—
- See the *Bulbous Roots*
- Coronarias or narrow-leaved, or Poppy Anemone
- Wood Anemone
- *White*
- *Blue*
- *Double*
- Apenine blue Wood Anemone
- Narcissus-flowered
- Goat's-rue leaved
- Forked-stalked
- Alpine
- HEPATICA
- *Single blue*
- *Double blue*
- *White*
- *Red*
- PULSATILLA, or Pasque Flower
- Angelica (ANGELICA)
- Common
- Dark-purple
- Shining
- Anthemis (CHAMOMILE)
- Noble or Common
- *Single white*
- *Double white*
- PYRETHRUM, or Pellitory of Spain
- Dyer's Tansey-leaved
- Anthericum (SPIDER-WORT)
- LILIAGO, or Grass leaved
- LILIASTRUM, or Savoy Spider-wort
- Offifragous, or yellow Anthyllis

- Anthyllis (KIDNEY VETCH)
 — Scarlet
 Antirrhinum (SNAP DRAGON & TOAD'S FLAX)
 — Major or greater Snap Dragon
 — *White flowered*
 — *Red*
 — *Purple*
 — *Yellow*
 — *Variegated*
 — *Striped leaved*
 — Montpellier Snap - Dragon
 — Genista-leaved
 — LINARIA, or Toad's Flax
 — *Common yellow*
 — *Yellow and white*
 Apocynum (DOG'S BANE)
 — Tutfan-leaved
 — Hemp Apocynum of Canada
 Aquilegia (COLUMBINE)
 — Common single
 — *Starry flowered*
 — *Rose flowered*
 — *Nectarium flowered*
 — *Striped flowered*
 — *Double flowered of each*
 — Alpine Columbine
 — Canada Columbine
 Arabis (BASTARD TOWER MUSTARD)
 — Alpine Arabis

- Aretia (ARETIA)
 — Alpine hoary-stalked
 Arenaria (*Arenaria*)
 — Great flowered
 Aristolochia (BIRTHWORT)
 — Long rooted
 — Round rooted
 — Upright stalked
 — Spanish
 — Odorous American
 Arnica (ARNICA)
 — Mountain Arnica
 — Scorpion-rooted
 Artemisia (MUGWORT, WORMWOOD, &c.)
 — *Abfintbium*, or common Wormwood
 — Sea Wormwood
 — Tartarian Southernwood
 — Intire leaved Artemisia
 — Blue, or Lavender leaved
 — *Dracunculus*, Dragon Herb, or Tarragon
 Arum (ARUM, or WAKE ROBIN)
 — Spotted or common
 — Dragon Arum, or Dragons
 — Three leaved
 — Virginian
 — Beet-leaved
 — *Arisarum*, Friar's Cowl, or Italian Arum
 — *Variegated leaved*
 Arundo (Reed)
 — Manured, or Spanish
 — *Variegated Indian*

Common

- Common Marsh Reed
- Asarum (ASARABACCA)
- Common European
- Canada
- Virginian
- Asclepias (SWALLOW-
WORT, DOG'S
BANE, &c.)
- Officinal yellow
- Black-flowered
- Syrian Dog's Bane
- *Exalted white*
- Purple Asclepias
- Incarnate or Flesh-coloured
- Amœuous or Pleasant,
or oval Purple leaved
- Tuberous Asclepias, or
Orange Apocynum
- Asperula (WOOD-ROOF)
- Odoriferous, or sweet
- Asphodelus (ASPHO-
DEL, or King's Spear)
- Yellow
- Branching white
- Fistulous or hollow
- Asplenium (SPLEEN-
WORT, &c.)
- *Ceterach*, or common
- *Scolopendrium*, or
Hart's Tongue
- Curled leaved
- *Trichomanes*, or Maid-
en-hair
- Green
- *Ruta Muraria*, or Wall-
rue
- After (STAR-WORT)
- (*Amellus*) or Italian
- After
- Alpine
- Great flowered
- Divaricated branch-
ing
- Heath-like
- Dumosed or bushy
- Purple
- Slender-leaved
- Rigid-leaved
- Polished stalked
- Virgated, or twiggy
- Concoloured blue
- Linaria leaved
- Linum leaved
- Mutable flowered
- Tradescants after
- Sorrow flowered
- Creeping
- *Tripolium*, or Sea
Star-wort
- Corymbus flowering
- Undulate leaved
- Umbel flowering
- Heart leaved
- Prickly
- Astragalus (MILK-
VETCH)
- *Cicer*, or Bladder-pod-
ded
- Liquoricy, or sweet-
leaved
- Alpine
- Sand Astragalus
- Fox-tail-like
- Goat's Rue-formed
- Astrantia (BLACK MAS-
TER-WORT)
- Major
- Minor
- Athamanta

- Meum, or Spignel
- Atropa (DEADLY NIGHTSHADE)
- Belladonna, or Common
- Mandragora, or Mandrake
- Bellis (DAISY)
- Perennial common
 - Double red
 - Double variegated
 - Double white
 - Crestated, or Cock's-comb flowered
 - Proliferous, childing, or Hen and Chicken
- Betonica (BETONY)
- Official common
- Danish
- Alpine
- Oriental
- Euphthalmum (OX-EYE)
- Great flowered
- Helianthus-like
- Eupleurum (HARE'S EAR)
- Long-leaved
- Cacalia (ALPINE COLT'S FOOT)
- Hastated, or Halbert-leaved
- Sweet
- Atriplex-leaved
- Calla (BASTARD ARUM)
- Marsh-growing
- Caltha (MARSH MARIGOLD)
- Double flowered
- Campanula (BELL-FLOWER)
- Peach leaved
 - Double blue
 - Double white
 - Single of each
- Round leaved
- Pyramidal blue
- Glomerated less
- Thyrs-like flowering
- Rhomboideal leaved
- Trachelium, or Great Throat-wort
- Broad leaved Giant Throat-wort
- Saxatile Daisy-leaved
- Canterbury Bells.
- See the Biennials
- Cardamine (LADY'S SMOCK)
- Meadow double white
- Carduus (THISTLE)
- Fish Thistle
- Melancholy Thistle
- Cassia (SENNA)
- Maryland Senna
- Catanache (CANDY LION'S FOOT)
- Blue
- Centaurea CENTAURY)
- Pectinated leaved
- Phrygiatic ciliated leaved
- Mountain
- Scabius Centaury
- Cineraria, or greater blue bottle
- Siberian
- Splendent leaved
- Jacea, or Knapweed
- Great yellow Centaury
- Woad-leaved

cerastium

- Ceraftium (MOUSE EAR
 CHICKWEED
 — Creeping
 — Broad leaved
 — Field linear-leaved
 — Cerinthe (HONEY-
 WORT)
 — Minor, or lefs
 Chærophylum
 — (WILD CHERVIL)
 — Golden or yellow
 Cheiranthus (WALL-
 FLOWER, and Stock
 Gilliflower)
 — Common yellow Wall-
 flower
 — *Bloody*
 — *Double bloody*
 — Stock Gilliflower
 — *Brompton Stock*
 — *Red*
 — *Scarlet*
 — *Purple*
 — *White*
 — *Queen-Stock Purple*
 — *White*
 — *Purple*
 — *Red*
 — *Twickenham*
Purple
 — *Large shrubby white*
 — Ten week's Stock
 — See the *Annual Flow-
 ers*
 Cheledonium (CELAN-
 DINE)
 — Major double flowered
 Chelone (CHELONE)
 — Smooth red
 — White
- Hairy blue
 — *Pentstemon*, or lefs Che-
 lone
 Chrysanthemum
 (CHRYSANTHE-
 MUM, or Corn
 Marigold, &c.)
 — Black Alpine
 — *Leucanthemum*, or
 great white, or Ox-eye
 Daisy
 — Serotine great creeping
 — *Balsamita*, or Costmary
 Chrysocoma (GOLDY
 Locks)
 — German
 — Two-flowered Siberian
 Chrysosplenium
 (GOLDEN SPLEEN-
 WORT, or Golden Saxi-
 frage)
 — Alternate-leaved
 — Opposite-leaved
 Circeæ (ENCHANTER'S
 NIGHTSHADE)
 — Lutiian common
 — Alpine
 — Canada
 Clematis (VIRGIN'S
 BOWER)
 — Upright
 — Intire leaved
 Clinopodium (FIELD
 BASIL)
 — Common
 — Hoary
 Collinsonia (COLLIN-
 SONIA)
 — Canadian
 Clypeola (TREACLE
 MUS-

- MUSTARD) Maritime
 Spanish
 Comarum (MARSH CIN-
 QUEFOIL)
 Convallaria (LILY of the
 VALLEY, Solomon's
 Seal, &c)
 — Lily of the Valley
 — *Common single white*
 — *Double white*
 — *Red*
 — *Polygonatum*, or Solo-
 mon's Seal
 — Many flowered true
 — Verticillated, or whirl-
 ed
 — Broad-leaved
 — Racemose spiked
 — Two leaved
 Convolvulus (CONVOL-
 VULUS, or Bindweed)
 — Lineated-leaved Dwarf
 — *Soldanella*
 Conyza (FLEA BANE)
 — White
 Cereopsis (TICK SEED-
 ED SUN-FLOWER)
 — White
 — Alternate leaved
 — Whirled
 — Three-leaved
 — Lance-leaved
 Cornus (CORNEL)
 — Canada Dwarf, herba-
 ceous Cornel, or Dog
 Berry
 — Swedish
 Cortufa (Bears Ear SANI-
 CLE)
 — Matthiulus's short ca-
 lyxed
 — Gmelin's long calyxed
 Crithmum (SAMPHIRE)
 — Maritime, or Sea
 Crambe (SEA CAB-
 BAGE)
 Crotonaria (CROTOLA-
 RIA)
 — White
 — Blue
 Cyclamen (CYCLAMEN)
 or Sow Bread
 — European
 — *Purple flowered*
 — *Ivy-leaved Autumnal*
 — *Round-leaved*
Winter flowering,
 bright purple
 — *Heart leaved*
Spring flowering
 Cynoglossum
 (HOUND'S
 TONGUE)
 — *Omphalodes*, or blue
 Venus Navelwort
 Cypripedium (LADY'S
 SLIPPER)
 — *Calceolus*, or common
 yellow
 — Virginia large yellow
 — Canada large purple
 — *Large white*
 — Bulbous-rooted
 Oatiscia (BASTARD
 HEMP)
 Delphinium (LARK-
 SPUR)
 — Great flowered
 — Elated Siberian

- Bee Larkspur
- American
- *Staphisagria*, or
Staves-acre
- Dentaria (TOOTHWORT)
- Five-leaved
- Bulb-bearing
- Dianthus (PINK,
Carnation, &c.)
- Deltoideous, or com-
mon Pink
- Superb fringed Pink
- Glaucous leaved
Mountain
- *Arenaria*, or Dept-ford
Pink
- Sand, or Stone Pink
- Alpine
- Different varieties are
- *Red Pink*
- *White*
- *Pleasant eye*,
many sorts
- *Red Cob*
- *White Shock*, or
fringed
- *Painted Lady*
- *Clove Pink*, deep red
- *Old Man's Head*
- *Caryophyllus*, or Clove
Gilliflower, and Carna-
tion
- *Red Clove*
- *Deep Red*
- *Double flowered*
- *Coronarius*, called Co-
ronation, or Carnation
- *Red*
- *White*
- *Red and white*

Variegated and striped,
many beautiful double
varieties, divided by the
Florists into different
classes, viz.

- *Flakes*
- *Bizares*
- *Piquettes*
- *Painted Lady*
- *Who'e Blowers*
- *Bursters*
- Barbated Dianthus,
called Sweet-William
- *Red flowered*
- *Scarlet*
- *Red and White*
- *Variegated*
- *Double of each*
- *Large double purple*;
very beautiful
- *Mule*, or *double Sweet-*
William Pink

Dictamnus (FRAXINEL-
LA)

- *White*
- *Red*
- Digitalis (FOX-GLOVE)
- *Purple flowered*
- *White*
- *Yellow (greater)*
- *Lesser yellow*
- *Ferrugineous*, or iron
coloured
- *Verbascum leaved*

Dodecatheon (AMERI-
CAN COWSLIP, OF
MEADIA)

- Doronicum (LEOPARD'S
BANE)
- *Greater*

— *Plantain*

- Plantain leaved
- *Bellediastrum*, or daisy leaved
- Draba (WHITLOW GRASS)
- Alpine
- Dracocephalum (DRAGON'S HEAD)
- Virginian
- Austrian
- *Russchiana*, or hyssop-leaved
- Dryas (DRYAS)
- Eight petal'd Hibernian
- Echinops (GLOBE THISTLE)
- *Ritro*, or lesser
- Echium (VIPERS BUGLOSS)
- Epilobium (FRENCH WILLOW)
- Narrow leaved red
- Broad leaved red
- White flowered
- Hairy leaved
- Variegated leaved
- Equisetum (HORSE-TAIL)
- Winter Horse-tail
- Epimedium (BARREN WORT)
- Alpine
- Erigeron (ERIGERON)
- Acrid Blue
- Purple, or Labradore Aster
- Erinus (ERINUS)
- Alpine branching-flow-ered

- Eryngium (SEA HOLLY)
- Maritime, or common prickly
- Fetid, or stinking
- Plane leaved
- Amethystine, or blue leaved
- Aquatic
- Alpine
- Campaign pinnated
- Erysimum (WINTER CRESS, or Hedge Mustard)
- Barbarea, or common yellow
- *Double yellow*
- Erythronium (DOG'S TOOTH VIOLET)
- Dens-canis, or Dog's Tooth
- *Purple*
- *White*
- Eupatorium Hemp AGRIMONY
- Cannabinous, or common
- Sessile leaved
- Purple
- Tall growing
- Perfoliated leaved
- Spotted
- Aromatic
- Odoriferous
- Ageratoides
- Euphorbia (SPRUCE)
- Coral-like stalked
- *Myrsinitis*, or Dwarf
- Ferula (FENNEL GIANT)
- Common tall

Glaucous-

- Glaucous-leaved
- Canada shining
- Tangier
- Fragaria (STRAWBERRY)
 - Scarlet Strawberry
 - Common scarlet
 - Imperial scarlet
 - Striped leaved
 - Wood Strawberry
 - Red fruited
 - White
 - Hautbois Strawberry
 - Globular fruited
 - Oval
 - Chili Strawberry (great fruited)
 - Large globular fruited
 - Oval fruited
 - Red fruited
 - Pale
 - Alpine, or prolific Strawberry, bearing monthly, from June till October, or November
 - Scarlet fruited
 - Pine-apple Strawberry
 - Red
 - White
 - Green
- Frankenia (SEA HEATH)
 - Polished stalked
 - Hairy
- Fumaria (FUMATORY)
 - Bulbous-rooted, red
 - White
 - Hollow bulbous-rooted, Purple
 - White
 - Ever-green, white
 - Yellow
- Galega (GOAT'S RUE)
 - Officinal, white
 - Purple
- Galeopsis (HEDGE-NETTLE)
 - Galeobdolan, striped, leaved
 - Yellow flowered
- Galium (LADY'S BED-STRAW)
 - Boreal, or northern
 - True, yellow
- Gaura (VIRGINIA LOOSE-STRIPE)
- Gentiana (GENTIAN)
 - Yellow
 - Purple
 - Acaulous or Dwarf-blue, called gentianella
 - Cross-wort Gentian
 - Swallow-wort Gentian
 - *Pneumonanthe*, or Marsh Gentian
 - Imperial
 - Soap-wort leaved
- Geranium (GERANIUM, or Crane's Bill)
 - Meadow Geranium
 - Sylvian, or Wood
 - Marsh
 - Spotted
 - Black
 - Maritime, or Sea
 - Knotty
 - Striated
 - Bloody
 - *Lancashire bloody Robertianum*

- Robertianum, or Herb Robert
- Geum (A V E N S)
- Urbanic, or common
- Virginian
- River
- Mountain
- Pyrenean
- Globularia (G L O B E D A I S Y)
- Common blue
- Acaulous, or stalkless
- Glycyrrhiza (L I Q U O R I C E)
- Smooth common
- Echinated
- Gnaphalium (E V E R - L A S T I N G)
- Plaintain leaved
- Sylvian
- Dioicous flowered
- Gundelia (G U N D E L I A)
- Tournefort's Acanthus-leaved
- Gypsophila (G Y P S O - P H I L A)
- Prostrate
- Perfoliated
- Hedysarum (F R E N C H H O N E Y - S U C K L E , St. Foin, &c.)
- Coronarius, or French Honey-suckle
- *Red*
- *White*
- *Onobrychis*, or common St. Foin
- Canada
- Violet St. Foin
- *Caput Galli*, or Cock's Head

- Helenium (B A S T A R D S U N - F L O W E R)
- Downy
- Autumnal flowering
- Broad leaved
- Helianthus (S U N - F L O W E R)
- Many - flowered common yellow everlasting Sun-flower
- *Double flowered*
- *Striped leaved*
- Ten petalled
- Tallest
- Giant
- Divaricated branching
- Tuberous-rooted, called Jerusalem Artichoke
- Helonias (H E L O N I A S)
- Bullated or fludded
- Asphodel-like
- Helleborus (H E L E - B O R E , or Bear's Foot)
- Stinking
- Green-flowered
- Three-leaved
- Black, or Christmas Rose ; large white Flower
- Winter aconite
- Hemerocallis (D A Y L I - L Y)
- Yellow
- Fulvid or reddish
- Hesperis (D A M E ' S V I O - L E T , or R O C K E T)
- Matronal, or common
- *White Rocket*
- *Purple*
- *Double of each*

E

Night

- Night-smelling
Heuchera (SANICLE)
- American
Hibiscus *palustris*
(MARSH ATHEA)
- Hieracium (HAWK-
WEED)
- Orange flowered
- Sabaudian Olive-leaved
- *Variegated leaved*
- *Philosella*, or Mouse-
ear Hawkweed
- Umbel flowering
Hippocrepis (HORSE-
SHOE VETCH)
- Tufted
Horminum (CLARY)
- Pyrenean
Humulus (HOP)
- Male Hop
- Female Hop
- Hydrastis (YELLOW
ROOT)
- Canadian
Hydrophyllum (WATER-
LEAF)
- Virginia
- Canada
Hyoscyamus (HEN-
BANE)
- Pnyfalodes-like, or
Bladder-calyxed
- Hypericum (St. JOHN'S
WORT, St. Peter's
WORT, &c.)
- Virginian
- Quadrangular stalked
- Perforated-leaved
- Beau-fu' upright
- Tom-nose, or downy
- Humifused, or trailing
- Prolific
- *Ascyron*, or Great flow-
ered St. Peter's Wort
- Elodeous, or Marsh
St. Peter's Wort
- Hyeoxis (CANADA
STAR OF BETHLE-
HEM)
- IBERIS (CANDY
TUFT)
- Round-leaved
- Imperatoria
- *Ostruthium*, or Bastard
Pellitory
- Inula (ELECAMPANE)
- *Helenium*, or common
- Salicinal, or Willow-
leaved
- Hairy
Oculus Christi, or Woolly
Flea-bane
- Samphire-like
- Iris (IRIS, or Fleur de
Lys)
- Chalcedonian large
black and white spotted
flowered
- German large blue
- Florentine white
- Dwarf purple
- Variegated purple
- Siberian grassy-leaved
- Squalid brown and yel-
low
- Sambuca scented
- Virginia Iris
- Spurious narrow-leaved
- Grass-leaved Austrian
- Vernal sweet purple
Tube-

- Tuberous - rooted, or Snake's-head Iris, black flowered
- Two - flowered greater Dwarf Purple
- *Pseud Acorus*, False Acorus, or Yellow Water Iris
- Isatis (WOAD, or Dyer's Weed)
- Lamium (ARCHANGEL)
- Great Purple
- Pale
- Helvetian
- Laserpitium (LASERWORT)
- Three-lobed leaved
- Siler, or Mountain Laserwort
- Lathyrus (EVERLASTING PEA, or Chickling Vetch)
- Broad-leaved, or Everlasting Pea
 - Great flowered
- Wood Chickling Vetch
- Peas form
- Cape-Horn, or Lord Anson's Pea
- Lavatera (LAVATERA)
- Tree Mallow
- Leontodon (DANDELION)
- Golden
- Leonurus (LION'S TAIL)
- *Cardiaca*, or Motherwort
- Lepidium (DITTANDER)
- Broad-leaved Ligusticum (LOVAGE)
- Common
- Scottish
- Linum (LINT, or FLAX)
- Perennial Siberian
- (Most-useful or cultivated) annual
- Lithospermum (GROMEREL)
- Official common
- Virginian
- Lobelia (CARDINAL FLOWER)
- Cardinalis, or scarlet
- Siphilitic blue
 - *White*
- Lotus (BIRD'S-FOOT TREFOIL)
- Maritime
- Corniculated
- Cytisus like
- Lupinus (LUPINE)
- Perennial
- Lunaria (MOON-WORT, or Honesty, &c.)
- Redivived, or abiding
 - *Purple*
 - *White*
- Lychnis (LYCHNIS, or Campion)
- Chalcedonian scarlet
 - *Single flowered*
 - *Double*
- Flos Cuculi*, Cuckow Flower; called Ragged Robin
 - *Double red*
 - *Double white*
- Viscous - stalked, or Catchfly

- Violet-coloured
- Hirsuted, or thaggy
- Italian
- Onoclea sensibilis* (SENSIBLE FERN)
- Oenothera* (TREE PRIMROSE)
- Shrubbyish
- Dwarf
- Great flowered
- Biennial
- Onosma* (ONOSMA)
- Oriental pendulous fruited
- Echium-like
- Ophioglossum* (ADDER'S TONGUE)
- Common
- Ophrys* (TWYBLADE ORCHIS)
- Ovate two-leaved, or Twyblade
- Spiral Orchis, or Lady's Traces
- *Monorchis*, or sweet smelling yellow
- Man Orchis
- Insect-bearing
- *Nidus Avis*, or Bird's-nest Orchis
- Apiferous, or Bee Orchis
- Orchis* (ORCHIS Common)
- Male Orchis
- *Morio*, Fool's or Female Orchis
- Pyramidal
- Maculated
- Military, or Soldier Orchis
- Butterfly Orchis
- Origanum* (ORIGANY OF MARJORAM)
- Common Pot Marjoram
- *Broad leaved*
- *Curled leaved*
- Winter Marjoram
- *Striped leaved*
- Orobus* (BITTER VETCH)
- Spring purple
- Lathyrus-like
- Black
- Yellow
- Wood Pea
- Tuberous-rooted
- Osmunda* (FLOWERING FERN)
- Royal Osmund
- *Spican'*, or Spiked rough spleenwort
- Curled, or Stone Fern
- *Lunaria*, or Moonwort Fern
- Oxalis* (WOOD SORREL)
- *Acetofella*, or common
- *Blue flowered*
- Upright Virginian
- Othonna* (RAGWORT)
- Cheiri-leaved African
- Pæonia* (PEONY)
- Official, or common
- *Red flowered*
- *Double red*
- *Double white*
- *Double Rose-coloured*
- Small, or Larkspur-leaved

- Panax (GINSENG)
 — Five-leaved
 — Three leaved
 Paris (TRUE-LOVE), or
 ONE-BERRY)
 Papaver (POPPY)
 — Oriental large scarlet
 — Cambrican, or Welsh
 Parthenium (BASTARD
 FEVER-FEW)
 — Intire leaved
 Peltaria (PELTARIA)
 — Alliaceous, Cordate
 and Lance-leaved
 Peucedanum (HOG'S
 FENNEL)
 Phlomis (JERUSALEM
 SAGE)
 — Tuberous-rooted
 — *Herba Venti*, or Wind
 Herb
 Phlox (LYCHNIDEA)
 — Divaricated early blue
 — White-flowered early
 — Most smooth
 — Carolina pyramidal
 — Spotted stalked
 — Panicle - flowering purple
 Physalis (WINTER
 CHERRY)
 — *Alkekengi*, or Pennial
 — Winter Cherry
 Phyteuma (HORNED
 RAMPION)
 — Few-flowered leafy
 spiked
 — Orbicular headed
 Phytolacca (AMERICAN
 NIGHT SHADE)
 — Decandrious flowered
 Plantago (PLANTAIN)
 — Maritime, or Sea
 — Asiatic, or Siberian
 — Buck's-horn Plantain
 — Alpine
 — *Pylidium*, branching or
 Flea-wort
 — Rosaceous
 Plumbago (LEAD-
 WORT)
 — European
 Podophillum (DUCK'S
 FOOT)
 Polemonium (GREEK
 VALERIAN)
 — Blue flowered
 — *White*
 — Creeping
 Polygonum (KNOT-
 GRASS; or Bistort)
 — *Bistorta*, or Bistort
 — Viviparous, or Child-
 ing
 — Virginia
 Polymnia (POLYMNIA)
 — Uvedale's opposite leav-
 ed
 — Canada alternate
 — *Tetragonotheca*, or Bas-
 tard Virginia Sun-flow-
 er
 Polypodium (POLY-PO-
 DY FERN)
 — Common
 — Welsh
 — Fragrant
 — Male Fern
 — Female Fern
 — Prick y

Fragile

- Fragile
- *Driopteris*, or Branching
- Stone Polypody
- Potentilla (CINQUE-FOIL)
- Strawberry-like
- Silvery
- Rock Alpine
- Creeping
- Upright
- Golden
- Montpelier
- Canada
- Hairy
- Poterium (BURNET)
- Primula (PRIMROSE, &c.)
- Common white
- Double yellow
- Double crimson
- Official yellow, or Cowslip
- *Great Cowslip*
- Polyanthus - primrose, or Polyanthus
- *Red*
- *Crimson*
- Purple
- Variegated, numerous varieties
- Primula *Auricula*, or Auricula, or Bear's Ear
- *Red*
- *Purple*
- *Crimson*
- *Blue*
- *Yellow*
- *Rosy*
- *Violet-coloured*
- *Red velvety*
- *Purple velvety*
- *Variegated*, many varieties
- Farinaceous Red
- Primula, or Bird's-eye-Primrose
- Prunella (SELF-HEAL)
- Common
- *Great flowered*
- Jagged leaved
- Pteris (BRAKES, or Fern)
- Aquiline, or Common
- Dark-purple of Virginia
- Pulmonaria (LUNG-WORT)
- Official blue
- *White flowered*
- Virginia
- Pyrola (WINTER-GREEN)
- Round leaved
- Spotted
- Ranunculus (RANUNCULUS, or Crow-Foot)
- Asiatic Garden Ranunculus: many varieties.
- See *Ranunculus*, in the Bulbous-rooted Tribe
- Aconite leaved, Crow-foot, or Fair Maid of France
- *Double white*, or White Bachelor's Button
- Acrid yellow Crow-foot; the double upright

- right
- Grass leaved
- Goldy-tuft, or Wood Crow-foot
- Tuberous-rooted
- Alpestrine Dwarf White
- Illyrian
- *Thora major*, or Leopard's - Bane Alpine Crow-foot
- Amplicaula-leaved
- *Flammula*, or Lesser Spear-wort
- Rheum (RHUBARB)
- Rhaphontic, or common
- Palmated leaved, true
- Undulated leaved
- Compact, heart-leaved
- *Ribes arabum*, or Arabian Ribes, with granulated leaves, the granules like currants (*Ribes*)
- Rhexia (VIRGINIA LOOSE-STRIPE)
- Virginia
- Maryland
- Rhodiola (ROSE-ROOT)
- Rubia (MADDER)
- Dyer's six-leaved
- Periginate four-leaved
- Rubus (BRAMBLE)
- Arctic Dwarf, or Cloud Berry
- *Chamaemorus*, or Dwarf Mulberry
- Rudbeckia (AMERICAN SUNFLOWER)
- Jagged-leaved
- Purple
- Dark purple
- Narrow-leaved
- Hairy-leaved Dwarf
- Rumex (DOCK, and Sorrel, &c.)
- *Patientia*, or Patient Dock
- Bloody Dock
- Acetosa, or Sorrel
- *Narrow-leaved*
- *Broad-leaved*
- Scutated, or Round-leaved French Sorrel
- Salvia (SAGE, CLARY)
- Official or common Sage.— See the Trees and Shrubs, and Kitchen Garden
- *Sclarea*, or Garden Clary
- Glutinous Clary
- Samolus *Valerandi*, or Round-leaved Water Pimpernel
- Sanguinaria canadense*, or Canada Puccoon
- Sanicula (SANICLE)
- European
- Maryland
- Saponaria (SOAPWORT)
- Official, double-flowered
- Mongrel, hollow-leaved
- Sarracenia (SIDESADDLE FLOWER)
- Purple
- Yellow

Satureja

Satureja (SAVORY)

- Capitated or headed
- Virginia
- [See also Kitchen Garden.]

Saururus (LIZARD'S TAIL)

- Bowing or nodding

Saxifraga (SAXIFRAGE)

- Granulous-rooted common white
- *Double flowered*
- Round leaved
- Thick leaved
- Hypnum-like, or Lady's Cushion
- Rivulate, palmated leaved
- Opposite leaved
- Punctated or dotted
- Wedge leaved
- Snowy
- Umbrose Saxifrage, or London Pride
- *Geum*, or Kidney leaved
- Pennsylvanian
- *Cotyledon*, or pyramidal white Saxifrage
- Mutated, or less pyramidal

Scabius (SCABIOUS)

- Dark purple, sweet
- Starry
- Alpine
- Snowy
- *Succisa*, or Devils Bit
- Grassy leaved
- Gramontian cut-leaved

Scandix (MYRRH)

- Odorous, or sweet

Scrophularia (FIG-WORT)

- Aquatic striped leaved
- Lucid or shining leaved
- Perigrinate nettle leaved
- Frutescent Verbena leaved

Scutellaria (SKULLCAP)

- Galericated, or common
- Alpine
- Perigrinate Florentine
- Tallest, or Nettle leaved
- Cretan

Sedum (LESSER

HOUSE LEEK)

- Common lesser evergreen
- Yellow Upright
- Reflexed leaved yellow
- Mule purple, or Germander leaved,
- Acrid small Sedum or Wall-Pepper
- Rock creeping
- Sexangular small
- *Telephium*, or Orpine
- *Purple flowered*
- *White*
- *Greater Purple*

Semper vivum

(GREATER HOUSE LEEK)

Common

- Common spreading headed
- Globular headed
- Cobweb Sedum
- Senecio (GROUNDSEL)
- Lurid purple
- *Doria*, or Sea Lavender leaved
- *Doronicum*, or Alpine
- *Saracens* All-heal
- Serapius (BASTARD HELLEBORE)
- Helleborine, or common
- Broad leaved
- Long leaved
- Serratula (SAWWORT)
- Tinctorous, or common
- Spiked purple
- Squarrose-calyxed
- Scariofed
- Præaltous Virginian
- Sibbaldia *procumbens* (BASTARD TRAILING CINQUEFOIL)
- Sibthorpia *Europæa* ✓
European Sibthorpia
- Sideritis (IRONWORT)
- Siene (VISCIOUS CAMPION)
- Nodding
- Amœnous, or Sea
- Virginia re
- Silphium (BASTARD CHRYSANTHEMUM)
- Laciniated leaved
- Perfoliated leaved
- Three leaved
- Connated opposite leaved
- Solidago (GOLDEN ROD)
- *Virga aurea*, or common
- *Dwarf common*
- Broad leaved
- Tall
- Canada
- Flexible stalked
- Grey-stalked Maryland
- Lateral flowered
- Wrinkled leaved
- Odorous
- New York
- White Solidago
- Minute A p n e
- Evergreen
- *Broad leaved Evergreen*
- Welsh
- Sophora (SOPHORA)
- Alopecurus-like, or Fox tail Sophora
- Dyer's yellow Sophora
- White
- Spigelia (WORM-GRASS)
- Maryland Worm-grafs, or Carolina India Pink
- Spiræa (SPIRÆA)
- *Ulmaria*, or Queen of the Meadow;—
- Double white
- *Striped leaved*
- *Aruncus*, or Goat's Beard Spiræa
- Three leaved Spiræa Lobated

- Lobated leaved purple
- *Filipendula*; Dropwort; or *Filipendula*
 - *Single white*
 - *Double white*
- Stachys (BASE HORE-HOUND)
 - Marsh growing
 - German
 - Cretan
- Statice (THRIFT, &c.)
 - Armeria, or common red flowered
 - *Narrow leaved*
 - *Broad leaved*
 - *White flowered*
 - *Limonium*, or Sea Lavender
 - Specious, Plaintain leaved
- Stipa (FEATHER GRASS)
 - Pennated
 - Rush leaved
- Swertia (Marsh Gentian)
- Symphytum (COMFREY)
 - Tuberous-rooted
 - Official
- Tabernæ montana (TABERNÆ MONTANA)
 - Common
 - *Cu led leaved*
 - *Balsamita*, or Cossmary
- Telephium (ORPINE)
 - Imperi's tru Opine
- Teucrium (GERMAN-

- DER)
 - *Chamaedrys*, or true
 - Shining leaved
 - Mountain
 - *Scordium*, or Water Germander
 - Pyrénean
 - Canada
 - *Scorodonia*, or Wood Sage
 - Hecanian purple
 - Virginia
- Thalictrides (MEADOW-RUE, and FEATHER-ED COLUMBINE)
 - Columbine leaved, called Feathered Columbine
 - Alpine
 - Yellow Meadow Rue
 - Lucid leaved
 - Tuberous-rooted
 - Cornuti's Canadian
 - Narrow
 - Fetid or stinking
- Thapsia (DEADLY CARRET)
- Thymus (THYME)
 - Common broad leaved
 - Narrow leaved
 - Striped
 - *Serpyllum*, wild or Mother of Thyme
 - *Lemon Thyme*
 - *Silver Thyme*
 - Headed Portugal
 - Upright narrow leaved
 - Villous leaved

Tirzella

- | | |
|---|--|
| <p>Tiarella (AMERICAN
SANICLE, or Scepter
flower,)
 Tormentilla (TORMEN-
TIO)
 — Upright
 — Creeping
 Trachelium (THREAT
WORT)
 — Blue flowered
 Tradescantia (VIRGI-
NIA SPIDER
WORT)
 — Deep blue
 — Light blue
 — White
 — Red
 Tragopogon (GOAT'S
BEARD)
 — Meadow greater yel-
low
 — Dalechamps Spanish
 Trichomanes MAIDEN
HAIR)
 — Tunbridge Maiden
Hair
 Trillium (HERB
TRUE LOVE)
 Trifolium (<i>Trefoil</i>)
 — Strawberry bearing
 — <i>Lupinaster</i>, or Bastard
Lupine
 — Alpine
 — Alpestrine purple
 Reddish
 Triosteum (FEVER-
ROOT)
 — Perfoliated leaved,
or false ipecacuanha
 — Narrow leaved</p> | <p>Trollius (GLOBE
RANUNCULUS)
 — European yellow
 — Asiatic Orange colour-
ed
 Turritis (TOWER
MUSTARD)
 — Smooth
 — Hairy
 Tussilago (COLTS
FOOT)
 — Common
 — White
 — Alpine
 — Greater or butter-
burr
 — Mule long stalked
 Urtica (NETTLE)
 — Snowy
 — Hemp stalked Tar-
tarian
 — Canadian
 Uvularia (UVULARIA)
 — Amplexicaule leaved
 — Perfoliated leaved
 Valeriana (VALERIAN)
 — Red, common
 — White
 — Dioicous flowered
 — <i>Pbu</i>, or German Vale-
rian
 — Trepteros, or ternate
leaved
 — Mountain
 — Pyrenean
 Valantia <i>cruciata</i>, or Cross
Wort
 Verbascum (MOTH
MULLEIN)</p> |
|---|--|

Greater

- Greater
- Phlomis-like
- *Lychnitis*, or white
- Black Verbascum
- Purple
- *Blattaria*, or yellow
- Myconic Verbascum
- Veratrum (WHITE
HELLEBORE)
- White Hellebore
- Black Veratrum
- Verbena (VERVAIN)
- Bonarian tall
- Official common
- Halbert Spear-
leaved
- Veronica (VERONICA,
or Speedwell)
- Virginia tall white
- *Blush coloured*
- Maritime three-leaved
- *White*
- *Blush*
- Hoary
- Long leaved
- Spiked
- Mountain round
leaved
- Acinos leaved
- Maryland diffused
- Siberian tall blue
- Germander Speed-
well
- Welch Veronica
- Official

- Vicia (VETCH
- Sylvian, or Wood
- Narbonne and
English
- Vinca (PERIWINKLE)
- Major, or greater
- Minor or less
- *Gold striped*
- *Silver striped*
- *Double flowered*
- Viola (VIOLET)
- Odorous, or common
sweet-scented
- *Single blue*
- *Double blue*
- *Double white*
- *Striped leaved*
- Palmated, or handed,
leaved
- Pedated, or foot-shap-
ed leaved
- Two flowered
- Marvellous flowered
- Hairy
- Canadian
- Yellow
- Marsh
- Yucca (ADAM'S
NEEDLE)
- Gloriose intire leaved
- Thready leaved
- Aloe leaved
- Zygophyllum (BEAN
CAPER)

The

The foregoing collection of herbaceous plants are principally perennials, or but few of the biennial kind, which will be given under a separate head; of the perennials, however, consisting of numerous very ornamental flowering plants, and many chiefly for variety, is a full display of all the principal sorts cultivated in the different English gardens for ornament and variety aforesaid, though probably but few gardens, singly, are furnished with all the different genera and species; and many require only the most beautiful flowering kinds for ornamenting the flower garden, and pleasure-ground, of such as flower in succession from the earliest period in Spring to the latest in Autumn; others again, requiring a large collection, both of the ornamental flowering kinds, and of other sorts for observation, variety, and curiosity; it was therefore thought expedient to give a list of the whole, or of all the principal sorts under one point of view; at the same time, shewing the various sorts that are occasionally cultivated, and to assist in making a collection of the sorts that may be particularly required, all or most of which may be obtained at the nurseries, in seed or plants; and in which, as many may chuse only an assortment of the more ornamental flowering kinds, for adorning the flower borders, &c. they consist principally of the following:

Aconites
Adonis
Aretia
Alyssums
Anthericums
Antirrhinum
Anemones
Apocynum
Asphodel
Asters
Arums
Arundo
Auricu'as
Anthyllis

Asclepias
Batchelor's Button
Larkspur
Bell Flower
Bugle
Bupstthalmum
Campanulas
Campion
Cardiaca
Cardamine
Cardinal Flower
Catchfly
Carnation
Christmas Rose

Crotolaria

Crotolaria
 Columbine
 Convallaria Cyclamen
 Crowfoot double
 Daisies
 Daisies, blue globular
 Dog's Tooth
 Day Lily
 Dragons
 Dropwort
 Dodecatheon
 Dentaria
 Epilobium
 Eternal Flower
 Ferula
 Fragaria
 Fox Glove
 French Willow
 Fraxinella
 Feathered Columbine
 Gentian
 Gentianella
 Globe Flower
 Goldy Locks
 Golden Rods
 Geranium
 Gnaphallium
 Greek Valerian
 Hellebore
 Hepatica
 Helianthus
 Hawk Weed
 Hypericums
 Hemerocalis
 Hollyhocks
 Iris
 Iberis
 Lady's Slipper
 Lady's Smock
 Lily of the Valley

Leonurus
 London Pride
 Loofestripe
 Lupine
 Lion's Tail
 Lychnis
 Lychnidea
 Linaria
 Marsh Marigold
 Madwort
 Meadow Sweet
 Monk's Hood
 Milfoil
 Milk Vetch
 Moth Mullein
 Monarda
 Navel Wort
 Osmund
 Ox-eye
 Oxalis
 Orobus
 Orpine
 Peony
 Paris
 Phlox
 Phlomis
 Polemonium
 Pilewort double
 Primrose
 Polyanthus
 Pea, everlasting
 Pinks
 Ranunculuses
 Ranunculus, globe
 Ragged Robin
 Rhubarb
 Rose-Campion
 Rudbeckia
 Salicaria
 Saxifrage

Sarracenia

Sarracenia	Swallow Worts
Scabius	Sunflowers
Scarlet Lychnis	Thalictrum
Scutella	Throat-Wort
Spider Worts	Toad Flax
Sedums	Tradescanti
Solomon's Seal	Thrift
Stone-Crop	Tree Primrose
Snap-Dragon	Valerian
Silene	Veronica
Solidago	Violet
Sophora	Vervain
Stock Gilliflower	Wall Flower

Thus from the general and select lists, any one may make a collection, from either, or both, as shall be required; the select list comprises the most ornamental flowering plants; and of which may either have the general collection for extensive gardens, or for smaller, make a selection of the principal or most desirable sorts; all of which may be had at the nurseries, and in full plants proper for flowering; to plant either in the Spring, to flower the same year, or in Autumn for flowering the year following; or having a plant or two of a sort, they may mostly be increased for multiplying the stock either by off-sets, parting the roots, slips, suckers, cuttings, layers, pipings, &c. as formerly suggested and many sorts may also be raised from seed in the Spring, to a proper size for flowering next year.

All the sorts are hardy to grow in any of the common flower borders, beds, &c. and some of the principal or most beautiful flowering kinds to plant in pots, for moving occasionally to adorn any particular compartments as may be required.

The season for their general planting is principally in the Spring, in February, March, and April, before they advance considerably for flowering; or they may mostly be successfully planted in the Autumn, after the flowering is past, from the middle or end of September, any time in October, and till the end of November, &c.
in

in open weather; having them for this purpose taken up with full roots, or occasionally some particular sorts with small balls of earth, especially in late Spring planting, in plants furnished with tops, either in leaves or stalks, that they may not receive any material check by removal; and by which, if occasion requires, several of the very fibrous-rooted kinds of small or moderate growth will admit of removal after being advanced near or quite to flowering; such as pinks, primroses, polyanthus, daisies, and various others; however, this period of transplanting is only mentioned for occasional practise, when omitted at the more proper season, of Spring and Autumn, before and after the flowering of the different plants.

In planting, generally introduce a collection of the most desirable or choicer sorts in assemblage, in the principal flower borders adjoining the main walks, lawns, &c. others dispose in the fronts, and vacant spaces of shrubby clumps; also some of the larger kinds should be admitted in the running shrubby plantations, extending along the boundaries of lawns, or other outward parts of the pleasure ground; and in all of which have a collection of different sorts disposed in a diversified order, the low growing kinds planted towards the front, the others less or more backward in the borders, &c. according to their degrees of full growth, two or three to four or five feet distance: observing for the large rooted kinds to open an aperture for each with a garden trowel, or spade; others smaller rooted may be planted occasionally with a dibble; and, in the greater part, should be disposed singly, or some, as anemones, ranunculuses, &c. may be planted in little clumps of four or five roots in each; but for these two latter in particular, see their management among the *bulbous rooted flowers*; after planting the different sorts intended, if dry weather, especially in late Spring planting, it will be necessary to water them, and repeat it occasionally till they take good root, and commence a renewed growth.

A collection

A collection of approved sorts may also be planted in beds in the flower garden: either each sort separate, or an assemblage of different sorts in each bed, disposed in a varied order, the tallest in the middle, the lowest towards the front, in a proper gradation, according to their growth.

Some principal ornamental flowering sorts should also be planted in pots, both for the convenience of removing to adorn any particular compartments, and that some of the more curious double-flowered kinds may be placed under shelter of frames, &c. in Winter, to protect them more effectually from the rigours of severe frost. And in some particular species, as auriculas and carnations, a collection of the capital varieties are commonly potted for stage or prize flowers: that is, when they begin to flower, being then placed upon a stage or stand defended with an awning at top, and to remain there during the time of their flowering, in order that the flowers may be protected from the sun, rains, &c. to preserve the lustre and beauty of the flowers longer in full perfection.

The propagation or method of raising the various sorts of fibrous-rooted perennial flowers, being occasionally both by seed in many sorts, and also by off-sets, slips of and parting the roots, some by cuttings of roots and flower-stalks, others by slips of the side top-shoots of the branches, and some by layers and pipings of the bottom shoots: though in regard to seed, that notwithstanding many sorts of perennials may be raised by that method, it is practised principally only to some particular sorts that do not encrease freely by off-sets, &c. and in others to obtain a larger supply, or new varieties; for as most of the perennials may be propagated expeditiously or plentifully by one or other of the above-mentioned other methods, and many of the plants so raised, if in Spring, will often flower the same year, and always flower the same in every particular as the parent plant, without much variation, and therefore are also the only certain methods to propagate the varieties with double flowers, and those

of

of particular colours, stripes and variegations, and other peculiar properties, as also the striped-leaved varieties, since all those propagated by off-sets, slips, parting roots, cuttings, layers, pipings; before intimated, always retain their particular properties; whereas, when those that sport in varieties are raised from seed, they rarely come the same again, but commonly vary exceedingly in their flowers, insomuch that, although the seed is saved from the finest flowers, as for instance, of carnations, auriculas, polyanthus, anemones, &c. all which being very prolific in numerous varieties, it is probable but few or none of the plants raised therefrom would produce flowers like the original, but prove sportive in many different varieties, and in which, when any new flowers of eligible properties are discovered, they are propagated and increased by layers, off-sets, parting roots, &c. thereby always sure to retain their peculiarities. Therefore, having thus far observed relative to the several ways of propagation, shall now proceed to explain each method.

By seed, many sorts may be raised, both to obtain a greater abundance of any particular species and varieties, or a supply of such as do not propagate freely by other methods, as well as to obtain new varieties of others of the sportive tribe, as polyanthus, auriculas, carnations, columbines, &c. as before observed: and which, and many other sorts of perennial flower seeds, may be had at the Nurseries and Seedshops, such particularly as the following kinds:

Alyssum	Columbines
Anemone	Fox-glove
Antirrhinum	Fraxenilla
Auricula	Geraniums
Bee Larkspur	Globe Thistle
Campanula	Hawk-weed
Campion (Rose)	Hollyhocks
Carnation	Honesty, or Sattin Flower
	Pea,

Pea, everlasting
 Pea, Cape Horn
 Pinks
 Polyanthus
 Ranunculus
 Rhubarb
 Rose Campion
 Snap-Dragon

Scabius
 Stock Gilliflower
 Scarlet Lychnis
 Valerian (Garden)
 Valerian (Greek)
 Wall-flowers,
 With several others of
 less note.

These may all be raised from seed, and many of them also by the other methods of propagation.

The seed is sowed commonly in the Spring, or some sorts also in Autumn, about August, or as soon as ripe, such as anemone, auricula, polyanthus, ranunculus, &c. However, the Spring months, March, April and May, is a good season for sowing all the sorts, which may be performed in any beds or borders of common moderately-light earth; each sort separate, either on the surface, and raked in evenly, or if beds, first raking them smooth, and with the back of the rake shove a little earth evenly off the surface, half an inch to an inch deep, into the alley, sow the seed, smooth it down with the spade, and with the rake proper, draw the earth from the alley evenly over the seed a regular depth; or, for small portions of any particular sorts of small seed, raking the earth fine, sow the seed, and sift earth over it: or any large seeds, as hollyhock, &c. or any of the other sorts, may be sowed in flat shallow drills, and earthed over regularly; or some may be sowed in pots or boxes. After sowing, if dry warm weather, give frequent waterings, both before and after the plants are up.

When the young plants, in June, July, or August, are two to three or four inches high, they, except the anemone and ranunculus kinds, should be pricked out in three or four-foot wide beds, or in borders, performing it generally in showery weather; drawing out the strongest plants, and prick them in the beds four to five or six inches distance. Give water at planting; and

if

if dry weather, give frequent waterings till they take root.

Continue them in growth, in the pricked-out beds, till the end of Autumn, about October or November, or occasionally till the following Spring: then, in either of these seasons, as in most sorts they will be of proper age and strength for flowering the ensuing Summer, a quantity should be transplanted into the borders, to remain for flowering; others may continue in the beds, especially those of the sportive kinds, of which it is desired to gain new varieties, as carnations, polyanthus, auriculas, &c. or some polyanthus may be transplanted into north or shady borders, as the most eligible situation, out of the sun, to preserve the flowering longer in perfection. Generally observing of the above sorts raised from seed, that the anemone and ranunculus kinds, somewhat of the nature of bulbs, they coming up in slender leaves, the roots should be permitted to remain till the second Summer, at the decay of the leaves, then may be taken up and planted separately in small drills three inches asunder, to have one or two years growth, and acquire due strength for full flowering; and then the desirable sorts may be planted where required.

All the above perennials, &c. raised from seed, will mostly flower the second year, except the anemones, &c. aforesaid; and the roots continuing perennial, some several, others many years, will annually flower in their respective seasons, and many of them will propagate and encrease by the root, and other different ways, for increase, if required: though some being rather biennial, as snapdragon, carnations, wall-flowers, stock gilliflower, &c. are apt to dwindle off in two or three years; yet the three former may be continued perennial in good flowering perfection, by propagating them by layers and cuttings annually, especially the curious varieties; and the stocks seldom continue in good strength for flowering longer than two years, or the shrubby white will sometimes stand several years in a dry soil.

By

By off-sets of the roots, &c. numerous sorts of the foregoing general collection of perennials propagate very abundantly, which are readily discovered in all the sorts as encrease by that method, by their multiplying less or more by young side-sucker plants, either immediately close round the main root, or some proceeding from the crown thereof, or a little above in some stocky plants, as in auricula, &c. and others by roots under ground, some in creeping rooting shoots above, and some by side-heads: all which, for propagation, may be detached or slipped off with roots, or near to the bottom, with as much rooty-like part as possible, that will soon emit fibres when planted; and this work may be performed either in Spring, February, March, April, before they shoot much for flowering, or in Autumn, after the flowering is past, about August, September, October and November, and in which, some will consist of roots furnished with leaves or shoots above, others principally of roots, and some in fleshy tubers, all which plant either in nursery beds, four to five or six inches asunder, to have a Summer's growth, then transplanted finally, or some strong full slips plant at once where they are to remain for flowering, they will flower the ensuing season; and in one year the whole will make strong plants, and be of several or many years continuance, and propagate plentifully in their turn for further encrease.

As some sorts multiply rather sparingly by off-sets, such as double hepatica, cyclamen, lady's slipper, orchis, &c. they must be observed accordingly.

By parting the roots, vast numbers of the perennial tribe are propagated, both of the fibrous and flesh-rooted kinds, when the roots are encreased by off-sets into bunches, less or more, and may be separated either by taking up the whole root, and part or divide it into as many different slips, larger or smaller, as they admit or is required, or may be effected occasionally by parting the outward off-sets without removing the mother root; and either of which may be performed in Spring or Autumn, as advised above in the off-

off-set propagation, managing them in the same manner.

In some fleshy and knob-rooted kinds, and others of fleshy tubers, as in monk's-hood, cyclamen, fumitory, winter-aconite, peonies, drop-wort, &c. they should generally be propagated by parting the roots, either before the shoot in the Spring, or after the flowering is past, and the leaves decay.

By slips.—This is effected either by detaching or slipping side off-sets of the roots or heads, or root and top together; and in some sorts, by unrooted slips of the young shoots of the heads, as in pinks, wall-flower, &c. and which is the general method of propagating the double kinds, to continue them permanent in colour and doubleness; observing, however, in propagating different sorts by slips of the roots, side-heads, or by slips of the root and top-part together, as in numerous sorts, it may be done principally in Autumn or Spring; and by unrooted slips of the young shoots of the head, as in wall-flower, &c. aforesaid, it must generally be performed in the small shoots of the former or same year, in April, May and June; when three or four, to five or six inches long, slipping them off close to the branches, pull away the under leaves, and plant them in a shady border, and give frequent waterings: they will soon emit roots and grow at top, make good plants by Autumn for flowering next year; planting some in pots, of the double bloody walls, &c. to move under protection of a frame or glass-case in Winter.

By Cuttings of Roots.—Some few plants, with fleshy knotty roots, admit of this, as some monk's-hood aconites, Solomon's seal, tuberous helianthus, &c. which may be performed either in the Spring, or in Autumn, in October or November, when the root may be cut or divided into parts as required, having two or three eyes to each, and planted at once where they are to remain.

By Cuttings of the Stalks.—This is done in Summer, about June, in some particular sorts, with tallish flower-stalks: and when the young stalks of the year are shot a
foot

foot to fifteen or eighteen inches long, is the proper period; performed occasionally in double scarlet lychnis, lychnidea, snap-dragon, double rocket, and some others of similar growth: cutting the stalks into lengths of about five or six inches, plant them in a shady border, and if covered with a hand-glass they will root sooner and more effectually; giving water.

By cuttings of the young shoots of the branches, may be performed in such sorts as continue in branchy heads, as wall flower and stock-gilliflower, &c. in the young shoots of the former or same year, in April, May and June, cut off three or four, to five or six inches long, and planted as directed for the slips.

By Layers.—This is practised principally to one or two particular species, such as the fine double carnations, clove-gilliflowers, and double red sweet-william, and sometimes for curious varieties of pinks; is performed by the young bottom shoots of the year, in June and July, when they are advanced of proper length to admit of laying in the earth as they remain on the mother plants. The method is, first provide a quantity of small hooked sticks of about three inches long, such as may be obtained in an old birch-broom, &c. with which to peg the layers down in the earth, and have also a quantity of light rich mold: then proceed to the shoots, pull away the under leaves, and shorten those at top even; and then, at a joint about the middle of the under side of the shoot, cut a gash with a sharp knife, nearly half-way through, in a somewhat slanting direction, continuing it near half-way up towards the next joint, making an opening in the earth outwards an inch or two deep, lay in the stem of the shoot where cut, keeping the cut part open, and the head of the layer upright, and in that position peg down the layer with one of the hooked sticks, and cover over the inserted part with some of the earth, the depth just mentioned, pressing it down gently: proceed then in the same manner with another, and so with all the rest, till all the proper shoots of each plant are layed; and give directly a moderate watering.

After

After being thus layed, give frequent supplies of water in dry weather, and in about four, five, or six weeks, they will be well rooted, and should then be cut from the parent plant, clean off beyond the cut part from whence the roots proceed, raising them out of the earth with as much root-fibres as possible; prune off the naked part of the stem at the bottom of the root close, cut the straggling tops of the head of leaves even, then plant the layers, either separately in small pots, till Autumn or Spring, or in large ones to remain; or if a large quantity, plant also a good many in beds of rich lightish earth, six inches asunder, and in both methods give water at planting, and as required, till they take good root; those in pots may be placed in a shady border till they are fresh rooted in the earth.

They may remain in the small pots and beds till September or October, to acquire tolerable strength, or until the following Spring, removing those in pots to a warm situation all Winter, or in that season placed in a garden frame, and sheltered from severe frost; but enjoy the full air all that season in open weather, that they may continue in strength; then, if not done in Autumn, proceed in February, or March, or beginning of April, to transplant those in small pots into larger, (24s or 16s) turning them out of the smaller pots with balls of earth to the roots, planting one, or at most two in each larger pot; give water at planting, and as required, and those in beds may be some transplanted into the borders, and in pots, as many as wanted, and the rest may continue in the beds for flowering.

They will all flower in full perfection the year after laying, and produce plenty of shoots for laying, as above; and it must be observed, that as those plants are principally of a biennial nature, it is proper to raise successional supplies by that method every year; as they always afford abundance of layers; and the plants so raised, produce constantly the same sort of flowers in every particular as those of the parent plants.

By pipings, is a method of propagation practised principally in raising the desirable varieties of pinks, to con-

tinue them with certainty the same ; and is effected by the young bottom shoots of the year, in June and July, detached, and planted, will form rooted plants in a few weeks, and will flower the year following ; the method is :--- the young shoots when three, or four, to five or six inches long, in June, or July aforesaid, are of proper growth for this business, when detach a quantity either by cutting or pulling them off at a middle joint ; clear off the under leaves, cut the top ones short, and also cut the bottom of the pipings or shoots even, then having prepared a bed, or large pots of fine light earth, the surface made even and smooth, then prick in the pipings only an inch or two asunder ; give directly a regular watering out of a pot, with the rose or head on the spout, it then would be of advantage to cover them close down with a hand glass, which would forward their rooting considerably ; they, however, will root freely without that aid, only not generally so soon ; observing to shade them with mats from the hot sun, and supply them with moderate waterings.

They will be rooted in a month, or five or six weeks, and shoot freely at top, observing when they advance in growth ; if any are covered down with hand glasses to give them air either by tilting up, or taking off the glasses ; and when the whole are properly rooted, and advanced in some tolerable strength in growth in five or six weeks after planting, they should be transplanted, in which, take up the whole with their full roots, cut the straggling tops even, and then plant them in any beds or borders five or six inches distance, and watered ; and in which beds let them remain in growth till October, &c. or following Spring, when some of the strongest may be removed with balls of earth, and planted in the flower borders, or some also in pots, the others may continue in the beds ; they will all flower the ensuing Summer, but in greater perfection the year following, and all produce the same sort of flowers as those of the respective parent varieties, from whence they were propagated.

Thus

Thus far concluding the different methods of propagating and raising the various sorts of herbaceous perennial flowers; next follow some general observations on the order of planting them in the different borders, beds, pots, &c. in the flower garden and pleasure-ground.

When the plants, raised by any of the different methods in Spring, or Summer, &c. and pricked or planted in nursery beds to obtain strength, they will generally be of proper growth for final transplanting in the following Autumn or Spring, in the beds, borders, and other compartments where they are to continue for flowering.

With respect to the proper season for planting them, it is performed in the Spring, and Autumn, though the Spring season is rather more adviseable, in which to plant the general supply, principally in February and March, or occasionally in April; generally before the plants advance considerably in their top growth; but many, or most of the sorts may also be planted in Autumn, after they have done flowering, and the stalks decayed, from about the middle or latter end of September to the same time in November; but as in October, November, and December, most sorts will be past flowering, and finished their year's growth, they may be successfully transplanted.

In removing them for planting in the different compartments intended, most of the fibrous-rooted kinds may be taken up with small balls of earth about the roots, whereby they will less feel their removal, and which may be more particularly adviseable in transplanting many of the more curious kinds, or for late Spring planting in general, especially if any are to be removed after the plants advance in the top shoots, or flower stems, &c. as also in occasionally removing any particular sorts after they are advanced for flowering, or in flower; as many sorts of low or moderate growing perennials of the most fibrous-rooted kinds will admit of removal, on particular occasions, after they shoot in Spring for flowering, by removing them with good balls

of earth, though it is always most adviseable to remove these plants for general planting, either in the Spring before they begin to shoot above, or advance considerably in their top growth, especially in their flower stems or in Autumn, after they have done flowering, as before observed, in which period they may be removed, either some with balls of earth, or mostly without, as may be convenient, taking them up with their full roots; however, in many sorts it will be of advantage to transplant them with moderate balls of earth, where they can be conveniently removed therewith; but numerous, or mostly all the sorts will also succeed by removal with the naked roots, at the proper season, in Spring, and Autumn, before they begin to shoot, or after they have done flowering, as above mentioned; so either method may be occasionally practised, as it may seem expedient, or as required.

Where any principal sorts are to be sent to any considerable distance, if taken up without balls, it would be eligible to wrap some light moss round the roots to preserve them as fresh as possible, till arrived at their places of destination for planting.

In planting the different sorts, always allot a portion of the most beautiful ornamental flowering kinds in the principal borders, &c. adjoining the main walks and lawns, disposed in a diversified order, of such as flower successively in the different seasons, from early in Spring till the end of Autumn, placing the lowest more or less forward, larger sorts towards the middle and back parts of the borders; two, or three, to four or five feet distance; some may also be disposed in beds, either in assemblage of different sorts, or each sort separate, one to two feet asunder; also many sorts are proper to introduce in shrubberies, the large growing kinds, as holly-hocks, perennial sunflowers, some asters, golden rods, and many others, placed some between the shrubs in vacant spaces, others of lower growth towards the front:---and some of the principal flowering kinds planted in pots singly.

As to the method of planting; let those removed with balls have an aperture opened with a garden trowel, or small spade, for each plant; some also removed without balls, having large roots, should also be planted in the same manner; others without balls with small roots may be planted with a dibble, and in each method close the earth well about the roots; and if dry weather, especially in late Spring planting, give each a moderate watering, particularly those furnished with tops, and repeat it occasionally till they take good root; and begin to advance in a renewed growth.

In their advanced state, when shot up, with flower stems, give proper support of sticks, or stakes to those of tall or climbing growth, or others with the flowers top heavy, and this should be performed in proper time, before the stems straggle about irregularly; and should be done in a neat manner, adapting the length of the sticks, or other supports to the height of the respective plants when at full growth, not placed promiscuously long sticks to plants of moderate stature; and let the stem be tied to the sticks in regular order, with strings of fresh bafs mat, or occasionally for some tall strong plants, with old rope yarn, &c. the tying concealed as much as possible, cutting off the long dangling ends close, that the whole may appear neat and decent; the climbing kinds should also have sticks adapted to their order of climbing, those climbing by tendrils or clasps, as in the pea tribe, branchy sticks are most eligible, and of the volubilate or twining climbers, as hops, &c. tall straight poles are proper, but they will also ascend upon any kind of sticks of a proper length; and as some plants are naturally of a trailing growth, extending on the surface of the ground, some may either be permitted to advance in their natural order, or others tied up to sticks.

As the different plants advance in their general growth, if any larger sorts spread, or straggle about irregularly, either prune or train them to proper order; cutting

cutting away broken and decayed shoots, and dead leaves; and keep the ground between them neat and clean from weeds, by occasional hoeing, raking, and weeding.

Those that are in pots must be often watered in Spring and Summer, in dry weather, two or three times a week, or in very hot dry weather in Summer, the pots will want almost daily watering.

According as the different sorts go out of bloom, and the flowers and stems decay, the decayed flowers and stalks should be cut down close, and all decayed leaves and littery parts cleared away.

And in Autumn, about October and November, when the whole will be past flowering, cut down all the decayed stems, and clear away all decayed leaves; then either hoe the borders, &c. cutting up all weeds, and rake them off, and the surface of the ground neatly raked even; or the borders or beds may be digged between the plants, to remain clear and decent for the Winter, and will prove beneficial to the plants in general.

The plants in pots, in Autumn, having the decayed flower-stalks cut down, should have the earth at top loosened an inch or two down, taking out some of the loosened earth, and fill up with fresh mold; then, in the beginning of Winter, about the end of October, or any time in November, should be removed in the pots to a warm situation in the full sun, to remain till the Spring: or some of the choicer sorts may be placed in a garden frame, in order to have protection of the glasses, and other covering in severe weather, in the above season.

In the Spring, about February or March, the borders should be neatly digged, and raked smooth, both to encourage the growth of the flowers, and to have a neat appearance; and the plants in the pots have the earth loosened again at top, and, if not done in Autumn, some taken out, and fill up the space with fresh mold, which will prove very beneficial to the plants:---and where plants are in pots

too small, they should be shifted into larger, generally removing them with the ball of earth intire; having some fresh earth in the bottom of the larger pot, place the plant therein, fill up with more fresh mold, and give water.

Where any of the large or spreading plants have encreased considerably, and spread much out of bounds, they should be reduced in Spring or Autumn, by slipping or cutting away the superfluous parts, both in root and top.

When required to save seed of the particular sorts of plants occasionally raised by that method, permit the stems and flower heads of the respective sorts to remain to perfect the seed in the proper season, in Summer and Autumn, gather them when fully ripe, spread upon cloths to dry, then beat or rub out the seed, clean it from the hulks and litter, and put up in bags, papers or boxes, &c. for sowing the following Spring.

As, in this class of plants, some are of the climbing kind, ascending either by tendrils, or by twining round any adjacent supports, some may be also planted to run over arbours, bowers, or some to ascend upon trees, poles, &c.

Likewise, as some are rock plants, adapted to grow on artificial rock-work and ruins, &c. some may be introduced in such places, and will have a very agreeable effect.

Others are aquatic, or water plants, adapted to grow in standing waters, as the *Nymphaea*, or Water Lily: some roots or seeds introduced in such places, will flower very agreeably. Also some are bog and marsh plants, to plant in such situations.

BIENNIAL FLOWERS.

BIENNIALS, or two-years plants, continue only two years in good perfection, being raised from seed one year, flower the next, ripen seed, and then either die in Winter following, or if any survive, they seldom

flower in equal perfection as in the first year, so are mostly raised every year from seed ; which, however, are few, in comparison to the Perennials, and as they are also inserted among the perennial plants, are here collected under one point of view, viz.

Canterbury Bell-Flower
(*Campanula*)

Carnation (*Dianthus*)

Clary, purple-topped
(*Salvia*)

Colutea, scarlet

French Honey-suckle
(*Hedysarum*)

Globe Thistle (*Echinops*)

Hollyhocks (*Alcea*)

Honesty (*Lunaria*)

Horned Poppy (*Celidonium*)

Pink (*Dianthus*)

Rocket (*Hesperis*)

Rose-Campion (*Lychnis*)

Scabious (*Scabius*)

Snap-dragon (*Antirrhinum*)

Stock-gilliflowers
(*Chieranthus*)

Sweet Williams (*Dianthus*)

Tree Mallow (*Lavatera*)

Tree primrose (*Oenothera*)

Wall-flower (*Chieranthus*)

THE
SHRUBBERY AND TREE
PLANTATIONS,
WITH
A GENERAL DISPLAY
OF THE
SHRUBS AND TREES
FOR
ORNAMENTAL AND USEFUL PLANTING
AND THEIR
GENERAL CULTURE.

PLANTATIONS of hardy Trees and Shrubs are the greatest ornament and utility to estates, which, however desirably situated and fertile, if destitute of plantations, appear naked and less important, as well as less valuable to the owner or occupier; and, besides the ornamental appearance of tree and shrubbery plantations, they afford shelter and shade to particular districts: and those of the forest or timber-trees, and fruit-tree tribes, produce great profit, both for various domestic occasions, and for sale; and in most estates of any considerable extent, they, as well as fertile soils and situations, for principal ornamental and useful plantations in the most desirable shrubs and trees, both deciduous and ever-green kinds, afford

waste grounds, either in low and marshy premises, or hilly and mountainous situations, not calculated for the culture of other vegetables; are often applicable to noble plantations of trees, both for use, ornament, and for diversifying the respective districts, and affording shelter to others, &c. And that in general, in grounds of smaller or larger extent, plantations of beautiful flowering shrubs, and other ornamental shrubs and trees, deciduous and ever-green, disposed in shrubberies in various diversified compartments, and in groves, thickets, clumps, walks, &c. in pleasure-grounds, parks, fields, &c. are great embellishments to the respective divisions, as intimated in the general observations for the plan of the Pleasure-ground, affording a vast source of entertaining variety in their different growths, foliage, flowers and fruit, &c.

That for the above-mentioned different shrubbery and tree plantations, there is a great variety of several hundred different species and varieties of trees and shrubs, consisting of deciduous and ever-green kinds, cultivated in the numerous nursery-grounds in the different parts of the kingdom for public supply, as may be required; and most of the principal sorts may be readily raised in private nurseries, for supplying the various plantations occasionally, as many sorts of trees, &c. may be raised abundantly from seed, in the common ground, sowed in the Spring, in beds of mellow earth, others by suckers, layers, cuttings, grafting and inoculating; and when the young trees and shrubs, either in the public or private nurseries, are from one, two, or three, to five, six, or seven feet high, or more, according to the nature of growth of the different sorts, they are of eligible size for final transplanting in the several plantations intended; though, on particular occasions, some tree kinds of ten to fifteen feet high, or more, may be removed, particularly some of the deciduous tribe, as elms, poplars, limes, &c. However, for general planting, it is always preferable to plant them in moderately young growth, as they will sooner
take

take good root, and establish themselves more effectually.

As all the trees and shrubs eligible for the fore-mentioned different plantations are of hardy growth, to grow in almost any exposure in the full ground, they are collected in one general arrangement, with all the species and varieties arranged in their proper genera, or families, under the botanic and general English name of the respective genera, and with the proper name of each species, &c. And although, in this division, there are numerous species that are natives originally of distant countries in Europe and America, &c. they are naturalized to this climate, so as they will all grow freely in the open ground the year round.

They consist of ornamental and timber trees, fruit trees, flowering and other ornamental shrubs, and under-shrubby kinds; the tree kinds being such as rise with a single straight stem to a great height, as in elm, oak, ash, poplar, &c. Shrubs are distinguished from trees generally by dividing low into several branches, or stems, and never grow high, as in roses, lilacs, mezereon, privet, phillyrea, &c. and under shrubs are of still lower growth, generally dividing low and bushy near the ground, as in southernwood, lavender, heaths, &c. and some appear somewhat between a shrubby and herbaceous growth, as in thyme, sage, savory, winter-savory, hyssop, &c.

And as the trees and shrubs in this collection, for the different hardy plantations in shrubberies and other districts, consist of deciduous and ever-green kinds, the former defoliating or shedding their leaves in Winter, the latter retaining them in verdure all the year, they are distinguished in the following register of the different genera, species, and varieties, by the ever-greens having this mark (§) prefixed to their names.

Acer (MAPLE TREE)

— Common smaller

— False plane, Greater

Maple, or Sycamore

— *Striped leaved*

— Plane-tree leaved Nor-
way Pennsylv-

- Pennsylvanian
- Red or Scarlet
 - *Sir Charles Wager's*
- Saccharinous, or Sugar
- Tartarian
- Montpelier
- Compound, or Ash-leaved
- Cretan
- Æsculus (HORSE CHESNUT)
- Common
- *Pavia*, or Scarlet
 - *Yellow*
- Amorpha (BASTARD INDIGO)
- Shrubby
- Amygdalus (ALMOND TREE, Peach, &c.)
- Common Almond Tree
 - *Sweet*
 - *Bitter*
 - *White flowered*
 - *Dwarf Almond*
- Peach Tree.—For the varieties of the fruit, *See the Fruit Garden*
 - *Nectarine Tree*
- Dwarf Peach
- Andromeda (ANDROMEDA, or Marsh Cistus)
- Panicle-flowering
- Racemose-flowering
- Myrtle-leaved
- Calyculated
- Shining-leaved
- Globe-bearing
- Pill-bearing
- Axillary-flowering
- Ferrugineous, or Irony
- Maryland
- *Polifolium*, or Greater Rosemary-leaved
- Tree Andromeda
- Anona (PAPAW-TREE, or Custard Apple)
- Three-lobed fruited
- Smooth-fruited
- Aralia (ANGELICA TREE)
- Thorny
- Arbutus (STRAWBERRY TREE)
- § Common Tree Arbutus
 - *White flowered*
 - *Red flowered*
 - *Double flowered*
 - *Waved leaved*
- § — *Andrachne*, or Eastern
- *Uva Ursi*, or Bear-ber-ry
- Aristolochia (BIRTH-WORT)
- Arboresecent, or Tree-like
- Ascyrum *Crux Andree*, or (St. ANDREW'S CROSS)
- Astragalus Tragacantha, or GOAT'S THORN)
- Atriplex (ORACH)
- *Halimus*, or Sea Purs-lane Tree
- Azalea (AMERICAN HONEY-SUCKLE)
- Viscous flowered
- Naked flowered
 - Early white flowered
 - Late white

Red

- Red
- Scarlet
- Baccharis (GROUNDSEL TREE)
- Halimus-leaved
- Berberis (BERBERRY TREE)
- Common red-fruited
- *Stoneless fruited*
- Betula (BIRCH TREE, Alder)
- White Birch
- Black Birch
- Lenta - twigged, or Poplar-leaved
- Canadian
- Dwarf
- Laciniated, or jagged-leaved
- *Alnus*, or Alder-Tree
- *Long-leaved Alder*
- *Hoary-leaved Alder*
- Angular-leaved
- Bignonia (TRUMPET FLOWER)
- Radicant Ash-leaved
- *Unguis Cati*, Cat-clawed, or four-leaved
- *Catalpa*, or Tree Bignonia
- Bupleurum (HARE'S EAR)
- Shrubby Æthiopian
- Buxus (BOX TREE)
- § — Arborecent, or Tree Box
- § — *Broad leaved*
- § — *Narrow leaved*
- § — *Silver striped leaved*

- § — Gold-striped leaved
- § — Silver - tipped leaved
- § — Under - shrubby, or Dwarf Box
- Calycanthus (CAROLINA ALL-SPICE)
- Carpinus (HORN-BEAM TREE)
- Common
- *Ostrya*, or Hop-flowered
- Eastern
- § Cassine (SOUTH-SEA TEA TREE)
- Ceanothus (NEW JERSEY TEA-TREE)
- Celastrus (CELASTRUS, or Staff-Tree)
- Scandent, or climbing
- Bullated or studded
- Celtis (NETTLE-TREE)
- South European
- Eastern
- Occidental, or Western
- Cephalanthus (BUTTON TREE)
- Cercis (JUDAS TREE)
- *Siliquestrum*, or European
- Canadian
- Chionanthus (SNOW-DROP TREE)
- § Cistus (CISTUS, or ROCK-ROSE)
- § — Ladaniferous, or Green

Laurus-

- § — Laurus-leaved
- § — Hoary-leaved
- § — Poplar-leaved
- § — Montpelier
- § — Italian
- § — Hairy-leaved
- § — *Helianthemum*, or
Sun-flower Dwarf
Cistus
- § — Apennine
- § — Salix-leaved
- § — Curled waved leaved
- § — Sage-leaved
- § Clematis (Climber,
VIRGIN'S BOWER)
- *Viticella*, or Common
Virgin's Bower
 - *Blue flowered*
 - *Purple*
 - *Red*
 - *Double flowered*
- *Vitalba*, or Common
White-Vine, or Tra-
veller's Joy, of the
Hedges
- Curled-flowered
- *Viorna*, or Carolinian
- Virginia
- Oriental
- Dioicous-flowered
- Clethra (CLETHRA)
- § Cneorum (WIDOW-
WAIL)
- Colutea (BLADDER
SENNA)
- Arborefcent, or Tree
(common)
- Oriental
- Istrian, or Pocock's
- Coriaria (SUMACH)
- Myrtle-leaved
- Cornus (CORNEL-
TREE, or Cornelian
Cherry, &c.)
- Male Cornel, or Cor-
nelian Cherry
- Female
- Floridous, or Great
Flowering Dog-wood
- Bloody-twigg'd
- White
- New Holland
- Upright
- Coronilla (JOINT-
PODDED COLUTEA)
- Coronated common
- *Emerus*, or Scorpion
Senna
- Corylus (HAZEL-NUT
TREE, &c.)
- Common
 - *Clustered nut*
 - *Long nut*
 - *Great Cob-nut*
- Filbert-Tree
 - White Filbert
 - Red
- Barcelona Nut
- *Colurna*, or Byzantine
Nut
- Cornuted or horned,
American
- Cratægus (WILD SER-
VICE-TREE, Haw-
thorn, &c.)
- Torminalic, or Wild
Service
- Oxyacantha, Haw-
thorn, or White
Thorn

Double

- *Double flowered*
- *Yellow berried*
- *Early flowering*, or
- *Glastonbury Thorn*
- Sweet Haw
- *Azarolus*, or Great Azarol
- *Crus-gallé*, or Cockspur Thorn
- Pear-leaved *Cratægus*
- *Yellow Pear-leaved*
- *Tomentose leaved*
- Maple leaved
- *Salix leaved*
- Plum leaved
- *Pennsylvanian*
- Scarlet greater American Azarol
- *Aria*, or White Beam Tree
- Cupressus (CYPRESS TREE)
 - § — *Evergreen Cypress*
 - § — *Upright-growing*
 - § — *Horizontal-spreading*
- *Distichous*, or two-ranked, *Deciduous Cypress*
- § — *Thyoides Cypress*, or white Cedar
- § — *Lusitanian*, or Cedar of Goa
- Cytisus (CYTISUS or BASE TREFOIL TREE, &c)
 - *Sessile leaved*, or *Cytisus secundus*
 - § — *Hairy Evergreen*
 - *Austrian*
- *Tartarian*
- *Supine Trailing*
- *Nigricant* or Black
- *Laburnum*, or Base Trefoil Tree, commonly called *Laburnum*
- *Narrow leaved*
- *Broad leaved*
- *Striped leaved*
- Daphne (WOOD LAUREL, and Mezereon)
 - § — *Laureola*, or Wood Laurel
 - *Alpine wooly leaved*
 - *Cneorum*, or narrow leaved
 - *Mezerium*, common Mezereon
 - *Red flowered*
 - *Early red*
 - *White*
- *Tartonnaira*, Silvery leaved
- Diospyros (INDIAN DATE PLUM)
 - *Common*, with the surface of the leaves different coloured
 - *Virginian*, or *Pishamin Plum*
- Dirca (LEATHER-WOOD)
 - *Marsh Leather-wood*
- Eleagnus (WILD OLIVE)
 - § — *Narrow leaved*
 - *Broad leaved*
 - *Round leaved*
 - § *Empetrum* (CROW BERRY)

Black

- Black
- Ephedra (SHRUBBY HORSE TAIL)
- § — Distachyous, or two ranked spiked
- § — Monostachyous, or one ranked
- § Epigœa (TRAILING ARBUTUS)
- Erica (HEATH)
- § — Common
- § — Southern
- § — *Tetralix*, or four leaved
- § — Many flowered
- § — Mediterranean purple
- § — Tubulous, or long tubed flowered
- The two latter being tenderish, should have a warmish situation
- Ciliated leaved
- Cinerous or Ash-coloured
- Euonymus (SPINDLE TREE)
- European common
- Broad leaved
- Verrucosous or Warted
- Dark purple
- § — American Ever-green
- Euphorbia (SPURGE)
- Amygdaloide
- Wood Spurge
- Fagus (BEECH TREE CHESNUT)
- Sylvian, or common
- Wood Beech
- *Broad leaved*
- *Purple leaved*
- *Curtanea*, or Chesnut Tree
- *Common Spanish*
- *Smaller*, or wild
- *Variigated leaved*
- FICUS (FIG TREE)
- *Carica*, or common—
- See the fruit garden for the varieties of the fruit.
- Fothergilla (FOTHERGILLA)
- Gardens common
- *Lance leaved*
- Fraxinus (ASH TREE)
- Loftiest, or common
- American
- White Ash
- Carolinian
- Parnicled; or flowering
- *Ornus*, or Dwarf
- Round leaved Manna Ash
- Intire leaved
- Gaultheria (GAULTHERIA)
- § — Procumbent, or trailing
- Genista (JOINTED BROOM)
- Arrowed Dwarf jointed
- Candicant Montpellier Genista
- Dyer's Broom
- Italian, or Lucca Broom
- Florid Spanish Dyers
- Ginkgo (MAIDEN HAIR TREE)
- Bilobated Japanese
- Gleditsia

Gleditsia (ACACIA,
three thorned)
— Three thorned
— Monospermous
— Unarmed or thornless
— Long thorned Chinese
Glycine (KIDNEY
BEAN TREE)
— Shrubby Carolina
§ — *Apios*, or Virginia
Glycine
Guilandina (CANADA
BONDOC)
— Dioicous flowered
Halesia (HALESIA)
— Tetrapterous, or four
sided fruited.
— Diptera, or two sided
Hamamelis (WYCH
HAZEL)
Hibiscus (ALTHÆA
FRUTEX)
— Syrian common
— *Purple flowered*
— *Red*
— *White*
— *Striped flowered*
— *White striped leaved*
— *Yellow striped leaved*
Hedera (IVY TREE)
§ — Common Ever-green
§ — *Striped leaved*
— Five leaved Deciduous,
or Virginia Creeper
Hippophae (HIPPO-
PHAE)
— *Rhamnoides*, or Sea
Buckthorn
Hypericum (ST. JOHN'S
WORT)

— Stinking common
— Proliferous
— Olympian
— *Androsæmum*, or Tutsan
— Canary
— *Ascyron*, or Eastern
St. Peter's Wort
Hyssopus (HYSSOP)
§ — Official common
§ — *Blue flowered*
§ — *White*
§ — *Striped leaved*
Hydrangea (HYDRAN-
GEA)
— Arborecent
Jasminum (JASMINE)
— Official, or common
white
— *Silver striped leaved*
— *Gold striped*
— Humble or Dwarf
Italian
— Shrubby yellow
Ilex (HOLLY TREE)
§ — *Aquifolium*, or
common Holly
§ — *Variegated leaved* ;
many varieties
§ — yellow berried
§ — *Smooth, or thornless*
leaved
§ — Echinated, or hedge-
hog leaved
§ — *Silver striped*
§ — *Gold striped*
§ — *Cassine*, or Dahoon
Holly
— *Broad-leaved*
— *Narrow leaved*
Itea (ITEA)
Virginian

- Virginian
 - *Greater*
 - *Less*
- Iva (FALSE JESUIT'S BARK)
 - Shrubby
- Juglans (WALNUT TREE)
 - Common — See the *Fruit Garden.*
 - Black
 - White, or Hicory Walnut
 - Cinereous, or Shag-barked
 - Dwarf
- Juniperus (JUNIPER &c.)
 - § — Common
 - § — Swedish
 - § — *Oxycedrus*, or great Spanish
 - § — Lycian Cedar
 - § — Phœnician Cedar
 - § — Virginian red Cedar
 - § — *Sabina*, or Savin
 - Dwarf spreading
 - Upright Portugal
 - Striped leaved
- Kalmia (DWARF LAUREL)
 - § — Narrow leaved
 - § — Broad leaved
 - § — Polifolious Glauous leaved
- Lavendula (LAVENDER)
 - § — *Spica*, or Spike flowering
 - § *Narrow leaved*
- § *Broad leaved*
 - § — *Stæchas*, or French Laurus (BAY TREE)
 - § — Noble or common
 - § — *Broad leaved*
 - § — *Narrow leaved*
 - Summer leaved, or deciduous
 - *Benzoin*, or Benjamin Tree
 - *Sassafras*, or Sassafras Tree
- Ledum (MARSH CISTUS, Wild Rosemary, &c.)
 - Marsh Cistus
 - Broad leaved
 - Thyme leaved
 - § *Striped leaved.*
- Ligustrum (PRIVET)
 - Common deciduous
 - § — Evergreen
 - § — Broad leaved Carolinian
- Liquidambar (SWEET GUM TREE)
 - *Styrax* flowering, Maple leaved
 - Spleenwort-fern leaved
- Liriodendron (LILY TREE, or TULIP TREE)
 - *Lonicera* (HONEY SUCKLE)
 - *Periclymenum*, or common
 - Dutch
 - German long blowing
 - Late red
 - Late white

- Oak leaved
- *Caprifolium*, or early white
- *Italian*
- § — Evergreen
- Trumpet flowered
- *Greater*
- *Less*
- § — American Evergreen
- § — *Balearican*
- Black-berried
- Blue-berried
- Tartarian
- *Xylosteum*, or fly Honey Suckle
- Alpigean upright fly
- *Diervilla*, or dwarf yellow
- *Symphoricarpos*, or Shubby St. Peter's Wort
- Glaucous leaved
- Lotus (BIRD'S FOOT TREPOIL)
- Hirsuted or hairy
- Upright, or straight podded
- Lycium (BOX-THORN)
- § — Barbarian
- Chinese
- Magnolia (LAUREL LEAVED TULIP TREE)
- § — Grand flowered Evergreen Magnolia, or common Laurel-Leaved Tulip tree
- § — *Ferrugineous leaved*
- Glaucous leaved small
- *Double flowered*

- Acuminated, or pointed-leaved blue
- Tripetalous, or Umbrella Magnolia
- Menispermum (MOON SEED)
- Canadian
- Virginian
- Mespilus (MEDLAR, &c.)
- German Medlar
- Arbutus leaved
- *Chamaemespilus*, Dwarf Mespilus, or Bastard Quince
- Canada Snowy Mespilus
- *Amalanchier*
- Pumilous, or Dwarf
- *Cotoneaster*, or Quince leaved
- Oriental, or dwarf Cherry of Mount Ida
- § — *Pyracantha*, or Evergreen Thorn
- Mimosa (SENSITIVE PLANT, ACACIA)
- Arboreous, or tree Sensitive Plant, or most elegant Mimosa
- Pinnatifid leaved Acacia, or Silk-flowering tree
- Morus (MULBERRY TREE)
- Black-fruited, common
- White
- Red
- Paper-Mulberry of Japan

Myrica

Myrica (DUTCH MYRTLE)

— Gale, sweet Gale, or Dutch Myrtle

— Ceriferous, wax-bearing, or Candle-berry Myrtle

§ — Evergreen

Candle-berry

Myrtle

Nyssa (TUPELO TREE)

— Aquatic, or Water

Tupelo

— Intire leaved

— Indented leaved

— Round leaved

— Sylvatic, or

Wood Upland

Olea (OLIVE TREE)

§ — European common or cultivated

§ — Wild, square branched

§ — Box-leaved

§ Spanish large fruited

Ononis (REST HARROW)

— Shrubby Ononis

— Red flowered

— White

Passiflora (PASSION-FLOWER)

— Blue-rayed, or common

Periploca (VIRGIN SILK)

Philadelphus (SYRINGA, or Mock-Orange)

— Coronarius white

flowered, or common

Syringa

— Inodorous, or scentless Dwarf

§ — Aromatic

Phillyrea (PHILLYREA)

§ — Broad leaved

— Hearted leaved

— Ovate sawed

§ — Serrated, or Sawed.

§ — Non-serrated

§ — Prickly

§ — Middle Phillyrea

(ovate lance leaved, almost intire)

§ — Olive leaved

§ — Privet leaved

§ — Box leaved

§ — Narrow leaved

(linear-lanced intire leaves)

§ — Rosemary leaved

Phlomis (JERUSALEM SAGE)

§ — Shrubby yellow

§ — Broad leaved

§ — Narrow leaved

— Purple flowering

Pinus (PINE-TREE, Fir, &c.)

§ — Wild or common, called Scotch Pine.

§ — Pinafter, or broad leaved

§ — Pinea, or Italian Stone Pine

— Strobus, or Wey-mouth Pine

Tada,

- § — *Tæda*, Torch or Frankincense Pine
- § — *Cembra*, or Siberian, and Alpine Stone Pine
- § — Swamp Virginia Pine
- § — Aleppo Pine
- § — *Abies*, or common Norway Spruce-Fir
- § — *Red Spruce*
- § — Canada Spruce
- § *White Canada*
- § — *Red*
- § — *Black*
- § — Hemlock Spruce-Fir
- § — *Picea*, Pitch, or Silver Fir
- § — *Balsamea*, or Balm of Gilead Fir
- § — *Cedrus*, or Cedar of Lebanon
- *Larix*, or Larch Tree
- Common
- Black
- Creeping
- Platanus (PLANE TREE)
- Oriental Plane
- Occidental American
- Spanish, or middle
- Populus (POPLAR TREE)
- White, or Abel-Tree
- *Cut-leaved*
- Black Poplar
- Tremulous or Aspen Poplar
- Lombardy, or pyramidal Poplar
- Carolina poplar
- Heart leaved
- Various leaved
- Balsamiferous, or Balsam Poplar
- *Lesser Balsam Poplar*, or *Tacambaica*
- Greek, or Athenian Poplar
- Prinos (WINTER BERRY)
- Verticillated, or whirled
- § — Smooth, evergreen
- Prunus (PLUM TREE, also Cherry, Apricot, &c.)
- Domestic, or common Plum-Tree; many varieties of the fruit.— See the *Fruit Garden*
- *Cerasus*, or common Cherry Tree.— See the *Fruit Garden* for the varieties of the fruit
- Double Blossom-Cherry
- Great wild Cherry-Tree
- *Padus*, or Bird Cherry
- § — Virginia Bird
- Canada
- *Mahaleb*, or perfumed Cherry
- *Armeniaca*, or Apricot Tree.— See the *Fruit-Garden*

- Garden for the varieties of the fruit*
- Siberian Apricot
 - Bullace Tree
 - Spinose Wild Plum, or Sloe Tree
 - § — *Lauro-Cerasus*, Cherry Laurel, or common Laurel-Tree
 - § — *Silver-striped leaved*
 - § — *Gold-striped leaved*
 - § — Portugal Laurel
- Ptelea (SHRUBBY TREFOIL)*
- Three-leaved
- Punica (POMEGRANATE TREE)*
- Granulous-fruited common
 - *Double flowered*
- Pyrus (PEAR-TREE, Apple, Quince, &c.)*
- Common Pear-Tree; many varieties of the fruit.— See *Fruit Garden*
 - *Double flowering*
 - *Variegated leaved*
 - *Malus*, or Apple Tree; many varieties of the fruit
 - Sweet-scented Crab
 - Ever green*
 - Sweet-scented*
 - Baccated or berried-fruited Apple, or Siberian Crab
 - *Cydonia*, or Quince
- Tree*
- Quercus (OAK TREE)*
- Common English
 - *Striped-leaved*
 - Willow-leaved Oak
 - *Oblong leaved*
 - *Short-leaved*
 - *Various leaved*
 - Red Oak
 - Black Oak
 - White Oak
 - *Prinus*, or Chesnut-leaved
 - *Esculus*, or pinnate-sinuuated, or Horse-Chesnut leaved
 - Prickly-cupped Spanish
 - *Cerris*, or Lyrate-pinnatifid-leaved Oak
 - Dwarf American
 - Exeter Oak
 - § — *Ilex arborea*, Tree
 - Ilex*, or common evergreen Oak
 - *Striped leaved*
 - § — *Suber*, or Cork-Tree
 - § — Gramuntian
 - Holly leaved Oak
 - § — Carolina live Oak
 - § — Scarlet-bearing, or Kermes Oak
- Rhamnus (BUCKTHORN, &c.)*
- Cathartic, or common
 - *Frangula*, or Berry-bearing Alder
 - Alpine doubly-crenated leaved
- Alaternus,*

- § — *Alaternus*, common
Alaternus
 — *Blotched leaved*
Silver-striped
leaved
 § — *Jagged-leaved*
 § — *Variegated-leaved*
 — *Paliurus*, or Christ's
 Thorn
 — *Lineated Rhamnus*,
 called *Supple Jack*
Rhododendron
 (DWARF ROSE BAY)
 § — *Ferrugineous*
Dwarf Alpine
 § — *Greater American*
 § — *Pontic*, *Violet-co-*
loured
 § — *Hirsuted*, or *shaggy*
hairy-leaved
Rhodora (CANADA
 ROSE BAY)
Rhus (SUMACH, Poison
 Oak, &c.)
 — *Coriaria*, *Tanner's*
Rhus, or *Elm-leaved*
Sumach
 — *Typhinous*, or *Stag's-*
Horn Sumach
 — *Smooth - branched*
Scarlet
 — *Copallinum*, or
Lentiscus-leaved
Rhus
 — *Cotinus* or *simple-*
leaved Rhus, or *Venice*
Sumach
 — *Toxicodendron*, or
Poison Oak; *trailing-*
rooting, *stalked*, *leaves*

- angular-downy*
 — *Radicant Toxicoden-*
dron, or *Poison Oak*;
stem-creeping radican-
t; *leaves ovate naked*
 — *Upright small-leaved*
 — *Vernix*, *Varnish-Tree*,
 or *pinnated-leaved*
Toxicodendron
 — *Chinese Lac-tree*
Robinia (FALSE ACA-
 CIA)
 — *Pseudo-Acacia*, or
Common False Acacia
 — *Hispid-stalked scarlet*
 — *Shrubby quaternate*
leaved
 — *Caragana*, *Siberian*
Caragana
 — *Pygmean*, or *Dwarf*
shrubby
Ribes (CURRANT
 TREE, and *Goose-*
berry)
 — *Red Currant*, *common*
 — *Large Red*
 — *Brick-coloured*
 — *White Currant*
 — *Black Currant*
 — *Grossularia*, or *Goose-*
berry Tree, many varie-
 ties of the fruit.—See
 the *Fruit Garden*
 — *Briary*, or *prickly-*
fruted
Rosa (ROSE-BUSH)
 — *Provence Rose*
 — *Common Red*
 — *Greater Cabbage*
 — *Moss Provence*

Blush

- | | |
|-------------------------------|-------------------------------------|
| — Blush red | — <i>Blush hundred-leaved</i> |
| — White provence | — <i>Singleton's Hundred-leaved</i> |
| — Childing | — <i>Pompone Hundred-leaved</i> |
| — Galican, or officinal | — <i>Villose, Apple-bearing</i> |
| Red Rose | Rose |
| — <i>Variiegated, or</i> | — <i>Double flowered</i> |
| <i>Rosa Mundi</i> | — <i>Alpine Red Spineless</i> |
| — Virgin Rose | — <i>Canine or Dog-Rose,</i> |
| — Marble Rose | <i>or Wild Briar</i> |
| — White Rose | — <i>Most spinous, or Scotch</i> |
| — <i>Single white</i> | Rose |
| — <i>Double white</i> | — <i>White odorous</i> |
| — Maiden's Blush | — <i>Yellow</i> |
| — Great Royal | — <i>Eglantine Rose, or</i> |
| Maiden's Blush | <i>Sweet-Briar</i> |
| — Ever-green Rose | — <i>Double flowered</i> |
| — <i>Musk double</i> | — <i>Blush flowered</i> |
| — <i>Musk single</i> | <i>double</i> |
| — Pendulous fruited, | — <i>Moss-bearing, or</i> |
| or greater Burnet-leaved | <i>Mossy</i> |
| Rose | — <i>Evergreen</i> |
| — Cinnamon Rose | — <i>Striped leaved</i> |
| — Carolina Rose | — <i>Indian evergreen</i> |
| — Hundred-leaved | Rose |
| Rose | |
| — <i>Dutch hundred-leaved</i> | |

The following are other different varieties of the foregoing species of Roses :

- | | |
|--------------------------|-------------------------|
| — Austrian two coloured, | — <i>Blush Monthly</i> |
| red and yellow | — <i>White</i> |
| — Yellow Austrian | — <i>Striped</i> |
| — <i>Double yellow</i> | — <i>Damascened, or</i> |
| — German, or Frankfort | <i>Damask Rose</i> |
| Rose | — <i>Red Damask</i> |
| — Monthly Rose | — <i>White Damask</i> |
| — <i>Red Monthly</i> | — <i>Black Damask</i> |
| | Variegated |

- Variegated York and Lancaster Rose
- Red Belgic, or Dutch
- Blush Belgic
- Great Royal Rose
- Dutch Velvet Rose
- Pennsylvanian Rose
- *Double flowered*
- Rose de Meux, or Dwarf French Rose
- Stebon, or Stepney Rose

- Portland Rose
- St. Francis's Rose
- Burnet-leaved
- Red-dwarf Burgundy Rose
- Great White Rose
- Red Cluster Rose
- Blush Cluster Rose
- White Cluster
- Marbled Rose
- Thornless Rose

Rosmarinus (ROSE-MARY)

- § — Official or common
- § — *Silver-striped leaved*
- § — *Gold-striped leaved*

Rubus (BRAMBLE, Raspberry)

- Shrubby or Common Bramble, or Blackberry
- *Double flowered*
- *White fruited*
- Raspberry (common)
- *Red Berried*
- *White*
- *Twice-Bearing*
- *Smooth-stalked*
- Odorous, or Flowering Virginia Raspberry
- Hispid Canada Raspberry

Ruscus (BUTCHER'S BROOM)

- § — Prickly common Ruscus, or Knee-Holly

- § — *Hypophyllum*, or Under-leaf flowering Ruscus, called Alexandrian Laurel
- *Broad-leaved*
- § — Racemose-flowering
- § — *Hypoglossum*, or tongued-leaved

Ruta (RUE)

- § — Rank-scented, or common
- § — Broad leaved
- § — Small leaved

Salix (SALLOW, or WILLOW)

- Sallow-Tree, common, or Black Willow; *the leaves ovate, rough*
- *Oval-leaved*
- *Oblong-leaved*
- *Elliptic Lance-leaved*
- *Striped-leaved*
- White common Willow
- Hermaphrodite-flowered, glandulous-leaved

- Triandrous flowered, splendid-leaved
- Pentandrous-flowered shining-leaved, sweet
- Almond-leaved
- Yellow Osier Willow
- Fragile, or brittle
- Babylonian, or Weeping
- Purple Willow
- Hastated, or Halbert-leaved
- Lanated, or Woolly
- Myrtle like Swedish
- Glaucous, or Sea-green
- Netted-leaved
- Fuscous or brown
- Rosemary-leaved
- Viminalous, or twiggy-branched
- *Helix*, or Dwarf Rose-Willow
- Arenarious, or Sand-Willow
- Aurited, or eared-leaved
- Creeping Dwarf
- Herbaceous alder-leaved
- Silene (SHRUBBY GLASS-WORT)
- Sambucus (ELDER-TREE)
- Black-berried, common
 - *White berried*
 - *Vari-gated leaved*
 - *Laciniated or cut, Parsly-leaved*
- Racemose, scarlet-berried
- Canada Elder
- Santolina (LAVENDER COTTON)
- § Common
- § Rosemary leaved
- § — *Greater*
- § — *Less*
- Sideroxylon (IRON WOOD)
- Lycium like, thorny
- Smilax (ROUGH BIND-WEED)
- Asperous, or common rough
- Round leaved
- Laurus leaved
- Tamnoideous, or Black Briony-like
- *Sarsaparilla*, or oval-leaved
- Solanum (NIGHT SHADE)
- *Dulca-mara*, Bitter Sweet, or Woody Nightshade
- *Striped leaved*
- Sorbus (SERVICE-TREE)
- Domestic, or cultivated True
- Bird's Service, or Mountain Ash
- *partium* (BROOM)
- § — Rushy-twigged yellow Spanish
- § *Double flowered*
- § — Sweeping, or common Besom Broom

White

- § — White Portugal
- § — Monospermous, or single-seeded White Spanish
- Radiated, or Starry
- Yellow Portugal
- Spiræa (SPIRÆA FRUTEX)
- Willow-leaved Spiræa
- Hoary scarlet
- Hypericum-leaved called Hypericum Frutex
- Crenated-leaved white
- Opulous-leaved, called Virginia Guelder-Rose
- Staphylæa (BLADDER NUT)
- Pinnated five-leaved
- Trifoliate, or three-leaved
- Stewartia (STEWARTIA)
- *Ma'acodendron*, or Virginia Stewartia
- *Red foot-stalked*
- *Green foot-stalked*
- Styrax (STORAX-TREE)
- Official Storax
- Large-leaved
- Syringa (LILAC)
- Common Lilac
- *Blue flowered*
- *Purple*
- *White*
- Persian Lilac
- *Blue flowered*
- *White*
- *Cut-leaved*

- Tamarix (TAMARISK TREE)
- French red barked
- German yellow barked
- Taxus (YEW TREE)
- § — Baccated, or berry bearing common
- Teucrium (GERMANDER)
- Yellowish shrubby
- *Shining leaved shrubby*
- Thea (TEA TREE)
- § — Green Tea Tree
- § — Bohea Tea
- Thuja (ARBOR VITÆ)
- § — Oriental, or Chinese
- § — Occidental, or American
- Thymus (THYME)
- § — Common Thyme
- § — *Broad leaved*
- § — *Small leaved*
- § — *Serpyllum*, wild Thyme
- § — *Greater*
- § — *Less*
- § — *Narrow leaved hairy*
- § — *Lemon Thyme*
- § — *Silver Thyme*
- § — Headed Portugal Thyme
- § — *Greater headed*
- § — *Less*
- § — *Variegated leaved*
- § — *Zygis*, or upright, narrow leaved
- § — *Villose headed*

- § — *Mastichina*, Mastic Thyme, or Marum
- Tilia* (LIME TREE)
- European common
 - Green twigg'd
 - Red twigg'd
 - American large leaved
Carolina large woolly leaved
- Ulmus* (ELM TREE)
- Campaign, or common English, with doubly sawed leaves
 - *Broad leaved*
 - *Narrow leaved*, or *Cornish Elm*
 - *Dutch*, with a *Spongy Bark*
 - *Smooth Wych Elm*
 - American singly-sawed leaved
 - *Rough leaved*
- Ulex* (FURSE OR WHINS)
- § — European common
- Vaccinium* (BILBERRY, or WHORTS)
- *Myrtillus*, or Bilberry
 - Great Whortle Berry
 - White Pennsylvanian
 - § — Vine of Ida, or great red Whorts
 - *Oxycoccus*, or Craneberry
 - Frondose, or leafy branched
 - Amcenus, or delightful flowering
 - Mucronated, or daggered leaved
- *Corymbus* flowering
- Privet leaved
- Staminaous flowering
- Hispid stalked
- Tenellous oval-leaved
- Turgid
- Viburnum* (WAY-FARING TREE, &c.)
- *Lantana*, or common Wayfaring Tree
 - *Broad leaved*
 - *Striped leaved*
 - Maple leaved
 - Dentated leaved
 - Pear leaved
 - Plum leaved
 - *Lentago*, or Canada *Viburnum*
 - *Cassinoides*, or Cassio-berry Bush
 - *Opulus*, Marsh Elder, or Guelder Rose
 - *Doub'e flowered*, or Snow-ball Tree
- § — *Tinus*, or *Laurus Tinus*
- § — *Common*
- § — *Striped leaved common*
- § — *Shining leaved*
- § — *Hairy shining leaved*
- § — *Striped shining leaved*
- Naked American *Tinus*
- Vinca* (PERIWINKLE)
- § — Major, or greater
 - § — Minor, or less
 - § — *Silver striped*

- | | |
|---|---|
| <p>§ — <i>Gold striped</i>
 Vitex (CHASTE TREE)
 — <i>Agnus castus</i>, or Chaste Tree
 — <i>Broad leaved</i>
 — <i>Narrow leaved</i>
 Vitis (VINE, or GRAPE VINE)
 — Viniferous, or common Grape Vine—many varieties of the fruit
 — See the <i>Fruit Garden</i>
 — Vulpinous, or Fox Grape
 § — Arboreous, or Tree Vine, with winged leaves</p> | <p>— Laciniated, or jagged leaved, called Parsley leaved Vine
 Yucca (ADAM'S NEEDLE)
 § — Filamentose, or thready-leaved; long threads from the serratures of the leaves
 § — Aloe leaved Yucca
 Zanthoxylum (TOOTH ACH TREE)
 — <i>Clava Herculis</i>, Hercules' Club, or Tooth-ach Tree</p> |
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The foregoing arrangement of the genera and species of the woody tribe, comprise the grand collection of hardy trees and shrubs that are cultivated in the open ground: some natives of Britain, but the greater part are foreign, from other different parts of Europe, and many from North America, and some other distant countries, consisting both of numerous beautiful flowering and other ornamental shrubs and trees, deciduous and ever-green kinds, eligible to plant in shrubberies, groves, walks, clumps, thickets, woods, and other ornamental plantations, in the pleasure garden, parks, and other districts, as may be required; and also the valuable tribe of deciduous and ever-green forest trees, to plant for timber and underwood; with the various species of fruit-trees, both to plant for ornament and variety, and for fruit-bearing.

All of which different species and varieties of shrubs and trees are raised abundantly in the common nursery-grounds for public supply; or those who may incline to raise any desirable or principal sorts occasionally to

assist in furnishing their plantations, it may be easily effected in numerous species and varieties, principally either by seed, as in many sorts, others both by seed, suckers, layers, cuttings, and many chiefly by one or other of the three latter methods of propagation, and some occasionally propagate freely by all these different methods; and likewise many sorts require to be raised by grafting and budding, especially such as either do not furnish seed nor suckers, or that do not grow freely by cuttings and layers, or in particular varieties that degenerate when raised from seed, and that propagate reluctantly by the other methods; and in many of the principal fruit trees in particular, they are generally raised by grafting and budding, several also by layers, cuttings, suckers, and some by seed or nuts, as explained under their different heads in the Fruit-Garden Division.

However, as the general method of propagating or raising the principal supply of hardy trees and shrubs, is by seed, suckers, layers and cuttings, all principally in the natural ground, in the Spring and Autumn seasons, the following are generally intimations of the different methods:

By seed, many of the principal trees and shrub kinds are raised, and the seed thereof may be had at most of the principal seed-shops; especially of the following:

Acacia, three-thorned (<i>Gleditsia</i>)	Angelica-tree (<i>Aralia</i>)
Acacia False (<i>Robinia</i>)	Ash-tree (<i>Fraxinus</i>)
— Common	Apple-tree (<i>Pyrus Malus</i>)
— Scarlet, &c.	Ash Mountain (<i>Sorbus</i>)
Alder-tree (<i>Betula Alnus</i>)	Arbor Vitæ (<i>Thuja</i>)
Allspice-tree (<i>Calycanthus</i>)	— Occidental
Andromeda (<i>Andromeda</i>)	— Oriental
Amorpha (<i>Amorpha</i>)	Arbutus (<i>Arbutus</i>)
Anona or Papaw (<i>Anona</i>)	Almond (<i>Amygdalus</i>)
	Azalea (<i>Azalea</i>)

Azaroale

Azarole (*Crataegus*)
 Aria (*Mespilus*)
 Bay-tree (*Laurus*)
 — Common
 — Deciduous
 Benjamin-tree (*Laurus*)
 Beech-tree (*Fagus*)
 Bignonia Catalpa
 (*Bignonia*)
 Birch-tree (*Betula*)
 Bladder-nut (*Staphylea*)
 Bladder Senna (*Colutea*)
 Button-tree (*Cephalanthus*)
 Bird-cherry (*Prunus*)
 Berberry-tree (*Berberis*)
 Broom (*Spartium*)
 — Common
 — Spanish
 — White, &c.
 Broom Dwarf-jointed
 (*Genista*)
 — Portugal
 — Lucca, &c.
 Broom, Butcher's
 (*Ruscus*)
 Cedar of Lebanon (*Pinus*)
 Cedar red, &c. (*Juniperus*)
 — Red Virginia
 — White Carolina
 — Bermudian, &c.
 Celastrus (*Celastrus*)
 Cherry-tree (*Prunus*)
 — Common
 — Great Wild
 — Bird Cherries, &c.
 Cistus, or Rock-rose
 (*Cistus*)
 Chestnut-tree, Spanish
 (*Fagus*)
 Chestnut, Horse, (*Æsculus*)

Clethra (*Clethra*)
 Cornel, or Cornelian
 Cherry, &c. (*Cornus*)
 Crab-tree (*Pyrus*)
 — Siberian
 — Sweet-scented
 Cypress-tree (*Cypressus*)
 Cork-tree (*Quercus*)
 Cytisus, ever-green
 (*Cytisus*)
 Candle-berry Myrtle
 (*Myrica*)
 Dirca (Leather-wood)
 Dogwoods (*Cornus*)
 Elder-tree (*Sambucus*)
 Elm, some sorts (*Ulmus*)
 Euonymus, common and
 ever-green (*Euonymus*)
 Filbert-tree (*Corylus*)
 Fir-tree (*Pinus*) all the
 sorts
 Fringe-tree (*Chionanthus*)
 Hawthorns, &c. (*Crataegus*)
 many of the species
 Hamamelis, or Witch
 Hazel (*Hamamelis*)
 Hickory Nut-trees
 (*Juglans*)
 Hazel-nut (*Corylus*)
 Hornbeam-tree (*Carpinus*)
 Horse-chestnut (*Æsculus*)
 Holly-tree (*Ilex*)
 Hypericum (*Hypericum*)
 Iva frutescens (*Iva*)
 Ivy-tree (*Hedera*)
 Juniper-tree (*Juniperus*)
 Judas-tree (*Cercis*)
 Kalmias (*Kalmia*)
 Laburnums (*Cytisus*)
 Larch-tree (*Pinus*)

Laurel

Laurel-tree (*Prunus*)
 — Common
 — Portugal
 Laurel, Wood (*Daphne*)
 Lilac (*Syringa*)
 Liquidamber, or Sweet
 Gum-tree (*Liquidambar*)
 Lime-tree (*Tilia*)
 Magnolias (*Magnolia*)
 Maple-tree (*Acer*) most of
 the species
 Medlars (*Mespilus*)
 — Common
 — Arbutus-leaved
 — Canadian
 — Dwarf, and several
 others
 Mezereon (*Daphne*)
 Mountain Ash (*Sorbus*)
 Mulberry-tree (*Morus*)
 Nettle-tree (*Celtis*)
 Oak-tree (*Quercus*) all or
 most of the sorts
 Oak (ever-green) all the
 sorts
 Pine-tree (*Pinus*) all
 sorts
 Prinos, or Winter-Berry
 (*Prinos*)
 Plane-tree (*Platanus*)
 Plum-tree (*Prunus*)
 Pear-tree (*Pyrus*)
 Poplar-tree (*Populus*)
 — Carolina
 — Virginia, or most of
 the sorts
 Quince-tree (*Pyrus*)
 Rhododendron, or Rose
 Bay (*Rhododendron*)
 Rue-tree (*Ruta*)

Robinia, or False Acacia
 (*Robinia*)
 — Common
 — Scarlet
 Ruscus, or Butcher's
 Broom
 Sassafras-tree (*Laurus*)
 Snowdrop-tree (*Chionen-
 thus*)
 Service-tree Wild (*Cra-
 taegus*)
 Service-tree, Sweet
 (*Sorbus*)
 Spindle-tree (*Euony-
 mus*)
 Staphylea, or Bladder-nut
 (*Staphylea*)
 Sideroxylon, or Iron-wood
 (*Sideroxylon*)
 Staff-tree (*Celastrus*)
 Strawberry-tree (*Arbu-
 tus*)
 Sumach-tree (*Rhus*)
 Sycamore-tree (*Acer*)
 Tamarind-tree (*Tama-
 rix*)
 Toothach-tree (*Zan-
 thoxylum*)
 Tea-tree (*Thea*)
 Tulip-tree (*Lirioden-
 dron*)
 Tupelo-tree (*Nyssa*)
 Thyme (*Thymus*)
 Vaccinium, or Bilberry,
 &c. (*Vaccinium*)
 Viburnum, or Way-far-
 ing-tree (*Viburnum*)
 — Common, or
 Lantana
 — Dentated

Canada

— Canada	Walnut-tree (<i>Juglans</i>) all
Nakd, and several	the sorts
other sorts	Winter Berry.—See <i>Pri-</i>
Vine (<i>Vitis</i>)	<i>nos</i>
— Vulpina, or Fox-grape	Yew-tree (<i>Taxus</i>)

The above being the principal species of trees and shrubs that are occasionally raised from seed, many others are also sometimes raised by the same means when the seeds can be obtained, as some, both in the above list, and others do not ripen in this country; whereby the seeds cannot always be easily procured; however, many of them may also be propagated by cuttings, layers, suckers, grafting, budding, &c. but shall first mention the general method of raising them from the seeds of the different respective sorts.

The tree and shrub seeds consist of several different sorts in the different genera and species, &c. as nuts, acorns, mast, keys, stones, cones, kernels, and small seeds, and of which many sorts may be procured in Autumn, others principally in the Spring; and may be sowed in the Spring, in February, March, and beginning of April; or many of the hardier deciduous tree and shrub seeds particularly may be sowed in Autumn, in September, October, and November; though for most of the evergreens, the Spring is more eligible; such as pines, firs, cedars, cypress, arbutus, &c. and in general the Spring is a successful season for sowing most sorts of tree and shrub seed; and for which season of sowing, it is proper in most of the nut kinds, acorns, and stones, in order to preserve them perfectly good and sound till that time, to lay them in dry sand, or keep them very dry and close from the air, wet, and frost, as sometimes when sowed in the Autumn, many of them may be spoiled by the wet, frost, and vermin; observing, that in preparation for sowing, the seeds contained in cones, fruits, pods, capsules, and other vessels, must be taken out, also where several are contained in berries, those should be bruised or rubbed between the hands.

hands to separate the seeds ; but the acorns, and nuts, also the stones obtained from their fruits, are to be sowed whole as they are ; and in some sorts of seeds contained in berries, being of a very hard boney nature, they are sometimes two years before they grow, such as haws and holly berries, yew, &c. are, previous to sowing, sometimes buried in a trench in the ground, or in large pots, plunged therein, and covered with earth ridged over them a foot thick ; and thus remaining a year, preparing in vegetation, then being taken up, and sowed in the Spring, they come up the same year, though they may also be sowed at once, in Autumn, or Spring, in beds, and will come up the second Spring after ; however, most sorts (except of the above very hard stony kinds) come up the first Spring.

For sowing the different sorts of seeds, prepare beds of light earth four feet wide, and in which some may be sowed in drills, one, two, or three inches deep, especially all the nuts, stones, and acorns, and other large seeds, the drills six inches to a foot asunder ; or may be bedded in by raking one, two, or three inches depth of earth off the beds into the alleys, sow the seed over the surface of the beds, press them down with the back of the spade evenly into the ground, then cover them over equally with the earth out of the alley that was drawn off for that purpose, and rake the surface even.

Or likewise seeds of the more curious or tenderest plants of the evergreen kinds, and others may be sowed in large pots, in order for removing to different situations occasionally, as in some sheltered warm compartment in the full sun, in cold weather, in Spring, and Winter, and in a shady place in Summer ; as also to move some of the more tender sorts under occasional shelter in Winter, till the seedling plants are advanced a year or two in growth.

In either methods of sowing, give the seed-beds, &c. occasional waterings in dry warm weather, in the advanced part of the Spring and Summer ; keep them clean from weeds at all seasons, and as some hard stony seeds

seeds will not come up till the second Spring, do not disturb the ground on a supposition they are perished, for they will come up in their proper season; though most other sorts will come up the same year, of those sowed in the Spring, and those sowed in Autumn will rise the Spring following.

When the plants come up, give moderate watering in dry warm weather, in Summer; and in some small tenderer kinds occasional shade with mats, from the mid-day sun, will be necessary: keeping the whole very clear from weeds.

Then when the seedling trees and shrubs are of one or two years growth in the seed-beds, they should be planted out in the Spring, about February and March, in nursery lines, six to twelve inches distance, according to the size of the plants; likewise plant some of the more curious sorts in small pots, one in each, in order for moving under occasional shelter in Winter, and shade in Summer, the first year or two, or till advanced a little in size and strength, then transplanted into larger pots, or wholly into the full ground; and according as the different sorts in general, that were planted in close nursery rows, advance in size in one, two, or three years growth, or more, thin or transplant them wholly in the Spring at wider distances, in rows, one, to two, or three feet asunder, according to the sorts, by twelve to fifteen or eighteen inches in each row; all which keep clean from weeds by hoeing in Summer, and digging, between the rows in Winter, or Spring.

According as the tree kinds particularly advance in height, prune away the lower lateral or side shoots to run them with clean stems; but this pruning is more particularly eligible in the deciduous than in many of the evergreen tribe, especially all the pine and fir kinds, and other cone-bearing trees, which should be sparingly pruned in their young growth, only cutting off any very low straggling shoots, permitting the main top shoots in all sorts to aspire in height; likewise the shrub kinds, of upright growth, may have low straggling shoots pruned,

pruned, to promote their advancing more regularly above in full heads.

They will be proper for final transplanting for the different plantations required, the tree kinds when from three or four, to six, eight, or ten feet high; and the shrubs, when one, two or three, to five or six feet, according to their nature of growth.

By sucker-shoots arising from the root, many sorts, both of the tree and shrub kinds, are propagated, digging them up in Autumn, about October, November, &c. or in the Spring, with roots to each sucker, and plant them in nursery lines, one to two or three feet asunder, according to their size, and managed as mentioned for the seedling plants, till they are of a proper growth for final transplanting.

By cuttings of the young shoots of a year old, in Autumn or Spring, numerous sorts of trees and shrubs are also propagated, both of the deciduous and ever-green tribe: chusing the outward shoots of moderate growth, cutting them off from six or eight, to ten, twelve, or fifteen inches long, according to the growth of the different sorts, and plant them, some in a shady border, or large quantities in any of the open quarters of the nursery, inserting them half-way into the ground, in rows six inches to a foot asunder; or some of the more curious or tenderer kind may be planted in large pots, several in each, giving them water in Summer. They will be rooted after one Summer's growth, and have made shoots at top; when, in October, November, or following Spring, or after another year's growth, the large ones may be transplanted at wider distances, to remain to attain proper size for final transplanting, as observed of the seedling-raised plants and suckers.

In propagating by cuttings, it may be proper to observe, that few of the cone-bearing trees succeed well by that method, such as pines, firs, cedars, junipers, cypress, &c. being principally raised from seed.

By layers likewise of the young shoots, many sorts of trees and shrubs are propagated abundantly; performing

ming it in the autumn or Spring, on the lower young shoots and branches, as they remain on the parent trees and shrubs, bending down the shoots, or the pliable branches well furnished with young wood for laying, pegging them down with hooked sticks in a cavity made in the earth; then, generally, let each shoot for laying be gashed or slit a little on the under side, by a clean cut upward about an inch in length, which promotes their rooting more freely, laying that part in the earth two to three or four inches deep, keeping the gash open, and the top of the layers a few inches above ground, pegging down the stem of each securely, and earth them over the above depth. They, in most sorts will be rooted in one Summer, though some will be two years before that is effected; when, in Autumn or Spring, if they are properly struck, cut them from the stools, or mother plants, and plant them in rows in the nursery, to acquire proper growth for their several purposes in planting.

That, for considerable propagation by layers, as in the public nurseries, stools are formed, by having young trees, &c. cut down near the bottom, in order that they may produce proper supplies of lower shoots and branches near the ground, convenient for laying.

Or sometimes, in making layers in particular trees in which the branches are high from the ground, pots of earth are placed upon some kind of elevated stand, convenient to receive the layers, and to remain till rooted.

As observed of the cuttings, the pine and fir kinds, cedars, and others of that nature, do not succeed well by laying.

By grafting, many trees and shrubs are raised; but it is more particularly proper for many of the capital fruit-trees, and occasionally in particular varieties of other trees and shrubs, that either do not come the same from seed, or that do not succeed, or cannot be conveniently raised, by the other methods of propagation. However, as before observed, many of our best fruit-trees

trees are always raised principally by grafting, such as apples, pears, plums, cherries, medlars, &c. by which their different varieties are with certainty continued, by engrafting shoots of the respective sorts into proper stocks; and which method of propagation, both in fruit-trees, and other tree and shrub kinds that are occasionally propagated by grafting, is performed in the Spring, in February, March, and beginning of April, effected by inserting young shoots of the trees intended to propagate into the top of the stock or stem of young trees of the same family, the head of which being previously cut off for the reception of the graft, either by whip-grafting, or slit-grafting, but of which the former is the most commonly practised, performed upon small stocks of half an inch thick, or but little more; and the latter upon larger stocks, of from half an inch to an inch or inch and half thick in the part wherein the graft is to be inserted. The whip-grafting, however, is the most generally practised in the nurseries, both as the stocks are sooner of a proper size on which to graft, the operation more expeditiously performed, and chiefly more successful: in either of which the grafting is occasionally performed low in the stock, at six inches to one or two feet from the bottom, for dwarf trees, and at three, four, to five or six feet, for half and full standards; the stocks for grafting being generally raised from seed or suckers of trees of the respective families from which the grafts are to be detached, as apple-stocks upon which to graft any sort of apples, pear stocks for pears, and the same of others, and in all of which the graft unites with the stock in a month or six weeks, soon after begins to shoot above, and forms the new tree the same year, in a small growth of two, three, or four branches.

By budding, or inoculating buds of young shoots into the sides of the stem, many trees, &c. are also propagated; but, as observed of the grafting, is more particularly practised in raising several sorts of choicer fruit-trees, as peaches, nectarines, apricots, likewise cherries, plums, pears; and occasionally in propagat-
ing

ing some particular varieties of curious shrubs and trees, which do not succeed by other methods of propagation; and is performed in Summer, in July and beginning of August, with buds cut from the side of young shoots of the year, of such trees and shrubs as are intended to be propagated, and inserted into a slit in the side of the stem or stock of other young trees of the same family or kindred, the head not cut off till the Spring following, inserting the bud either low in the stock for dwarf trees, and at three, four, to five or six feet, for half and full standards, as observing of the grafting. The bud unites with the stock the same year, but remaining dormant till next Spring, about March, when the head of the stock being cut off near to, or two or three inches above the insertion of the bud, this then pushes forth in one strong shoot, advancing from one to two or three feet long, or more; by the end of Summer, and forms the new tree.

Generally observe, in the operations of grafting or budding, that the stocks in which the grafts and buds are to be inserted, must be either of the same family, or very near kindred, in respect to the different species of fruit, otherwise they will not succeed; and may be raised from the kernels, stones, nuts, &c. or by suckers sent up from the roots of the respective trees, and planted in nursery rows two feet and a half asunder, to attain one, two, or three years growth, proper for grafting and budding.

To raise particular varieties of the species of trees and shrubs, it cannot be effected with certainty by seed, as the seedlings are apt to vary; but those raised by grafting, budding, cuttings, and layers, continue invariably the same. Hence comes the utility of raising all the several varieties of fruits of the different species thereof, as the numerous different sorts of apples, pears, plums, cherries, peaches, &c. and the same of curious varieties of shrubs and ornamental trees, such as striped-leaved kinds, double-flowered sorts, and with flowers of particular colours, and other properties peculiar to the respective varieties: all which being
accidentally

accidentally obtained originally from the seed of their parent species, but which will not come the same again from seed, but in most sorts vary either to the original, or to other different varieties.

Thus, by the above different methods, the numerous species and varieties of trees and shrubs are propagated or raised, proper for the various ornamental and useful plantations; and when from one, two or three, to six, eight, or ten feet high, according to the nature of their different growths, they are of eligible size for final transplanting, for shrubberies and other ornamental plantation compartments, as well as the larger kinds, to plant for forest or timber trees, in woods, coppices, &c.

But, as before suggested, all the sorts of trees and shrubs in the foregoing arrangements may be had ready raised, at the public nurseries, in full collection, or as may be required, either young plants, or of larger size, according to their different growths, proper for all sorts of plantations intended.

Though, where considerable plantations of forest-trees, for timber, underwood, &c. are intended, it is of great importance, and much saving, for the proprietors or planters to have the requisite supply of trees raised in their own nurseries; or sometimes, for this occasion, may sow the seeds where the trees are to remain.

The season for general planting trees and shrubs, is Autumn and Spring. The Autumn planting may be commenced in September and October, in the ever-greens in particular; but for the deciduous kinds, the decay or fall of the leaf, middle or end of October, is the proper season to begin the planting, and may be continued, in open weather, all November and December, or any time during the Winter, in a mild open season: or also, in the same time, may plant many of the hardier ever-greens; but when appearance of frost setting in, defer all planting till Spring.—The Spring planting may be proceeded in, if open settled weather, in January, though more eligible in February; then

then forwarded to have the principal part finished in that month and March, especially of all deciduous trees and shrubs; continuing it also in the ever green tribe, of which, if a cold unfavourable Spring, the principal planting may be performed more successfully in March than earlier, especially in all the more tender sorts, as arbutus, magnolia, tea-tree, kalmias, &c. but is proper to finish planting these, and all the ever-green kinds, in the last-named month, and beginning or middle of April.

For planting, have them digged up with a full spread of roots, and some curious or tender sorts of evergreens particularly, if removed with moderate balls of earth, will be of advantage, so as not to receive much check by removal: however, in the general part, for principal planting all the sorts, both of deciduous and ever-green trees and shrubs, may be successfully removed without balls, taking them up with good roots to their full extent. And it is of much advantage to have them planted as soon after removal as possible, before the small roots and fibres are much dried, and have no more taken up at a time than can be soon planted; or where that unavoidably happens, trench them by the roots in the ground, to preserve them in good condition, and thence planted with all convenient dispatch.

Or, where any are to be conveyed to any considerable distance, they should be tied in bundles, and the roots strawed and matted round, or some matted quite to the top.

In making tree and shrub plantations, it is proper to remark, that in the tree kinds particularly, they are generally the most successful in the end, when they are finally transplanted while in moderately young growth, or from three or four, to five, six, eight or ten feet high, more especially those designed for woods or timber plantations; though, in particular cases, when desirous of having a plantation principally for shade, shelter, ornament, blind, &c. well advanced in growth as expeditiously as possible, large trees, of
from

from ten to fifteen feet high, or more, may, in many of the deciduous kinds particularly, be removed and planted with all desirable success; or even trees of twenty feet, on the same occasion, will succeed, if taken up with a large spread of roots: but trees removed, of that large size, seldom make equal progress, in proportion, as those that are transplanted in younger growth.

But the pine and fir kinds do not succeed well, unless they are finally transplanted in their young growth, of from three or four to six feet, especially if required to have them attain a lofty stature, for timber or other occasions.

That, as plantations of trees and shrubs consist of forest or timber plantations in woods and coppices, ornamental tree plantations, shrubberies, hedges, &c. &c. each is explained in its proper place, in the order following :

Forest-tree plantations consist of the largest and loftiest-growing hardy-tree kinds, commonly denominated forest or timber trees, and as such are generally disposed in extensive out-premises, to form woods, coppices, hedge-rows, &c. and are both of the greatest utility to cultivate for timber and underwood, for considerably encreasing the value and income of estates, and gives also an air of much importance and grandeur to the premises, as well as appear highly ornamental at all times of the year; and, in particular situations, they afford great shelter to the interior grounds and more tender plantations of curious trees and shrubs; and which plantations of forest trees may be variously disposed in low and high situations, the least calculated for the cultivation of corn, grass, and other herbaceous vegetables, as in low marshy grounds there are aquatic trees well adapted to such soils, such as willow, alder, poplar, birch, &c. and for higher premises, allot ash, oak, elm, maple, beech, horn-beam, chestnut, walnut, pines, firs, birches, cedar, holly, &c.

In

In making plantations of forest trees, they may be planted some in close plantations, placing the trees only five or six feet distance, to allow for thinning them by degrees, after the first seven or eight years, for poles and other purposes, till thinned to ten, fifteen, or twenty feet distance, or more. Others may be planted in more open plantations, in rows, ten, fifteen, or twenty feet asunder; but when planted closer, the trees draw up each other more expeditiously in growth, with strait clean stems.

When designed to make close plantations of forest trees, the ground, in situations and soils that will admit of plowing or digging, should, previous to planting, be well plowed, &c. some time before, and again at the planting season, which may commence in November, and continue occasionally, in open weather, till February or March; let the trees be taken up in the nursery with good root, of which shorten only long stragglers and broken and bruised parts: cut off strong side-shoots of the stem, leaving the tops entire, then may be planted, either by digging apertures for each tree, or, for small plants, by drawing furrows with the plow, deep enough to admit the roots a proper depth. Or sometimes, in making large close plantations of forest trees, it is effected by sowing the seeds, &c. at once, where the trees are to remain, the ground being well plowed, &c. and then draw shallow furrows or drills with the plow, five or six feet asunder, sow the seed therein thickly, and when the plants are of one or two, or three years growth, thin them to three feet distance in the lines; and in a few years after may thin them to six feet, and so continue thinning them by degrees, for poles, &c.

But for plantations intended in rows more distant, made with full-sized trees from the nursery, the ground need not be ploughed or digged; only dig a wide hole for the reception of each tree, ten to fifteen or twenty feet distance.

Keep the plantations well fenced from cattle, and clean from weeds, till the trees advance in growth; and

and sometimes trim up the stems from strong side-shoots, to promote a strait handsome growth, and to encourage the top to aspire more expeditiously in height, which always permit to remain entire, and shoot up as fast as possible.

And in the close plantations, according as the trees increase considerably in growth, may thin them once in seven, eight, or ten years, by cutting them down to the bottom, especially the deciduous kinds, leaving the handsomest trees to remain for timber, at from ten to fifteen or twenty feet, or more, when designed to have them attain the largest growth.

Or some close plantations may be allotted, to form coppices for under-wood, to cut once in seven or eight years, for poles, fire-wood, &c.

Ornamental plantations of trees and shrubs, to adorn pleasure grounds, parks, and any principal out premises, consist of a collection of the tree and shrub kinds in general, both those usually denominated ornamental, either not proper for timber trees, or of a peculiar, or curious ornamental appearance in growth, leaves, or flowers, &c. and of forest trees together, especially the more beautiful kinds, or of all the sorts without distinction, in large premises, to cause the greater diversity; and which plantations may be variously disposed in thickets, groves, walks, clumps, avenues, groups, single trees, single rows, double and treble ranges, straight lines, curves, sweeps, angles, circles, and other diversifications, where there is large scope of ground.

In pleasure grounds, having an open lawn of grass extending on one, or both fronts, &c. of the main dwelling-house, compartments of ornamental plantations, as above, may bound the sides of the lawn; beginning at some moderate distance from the house, and varying it wider and narrower at different intervals, for the greater diversity; furnished with tree and larger shrub kinds, more or less backwards, according to their respective heights, and having in front of the trees a plantation of flowering shrubs in continuation, and in detached clumps, convexed, and with the sides diversified.

fed in sweeps, and curves towards and from the lawn; the different clumps separated with grass, or gravel intervals proceeding from, and communicating with the lawn, and other parts of the pleasure-ground; and thus the plantation may be continued out gradually to the side boundary, leaving occasional openings where thought expedient for prospect from particular districts, generally in extending the plantations, keep the extreme part of the lawn somewhat open in the front of the house, not to intercept the view, or the lawn may terminate in a ha-ha, or water, &c. as formerly observed, to admit of extending the prospect over distant premises; and in the side plantations a space may be allotted for a serpentine gravel walk winding between the compartments of trees and shrubs, for private, shady, and sheltered walking, or communicating with more open and spacious walks and districts in different parts of the ground.

Or in those extending or running ornamental plantations, having a serpentine walk winding through the middle, may have tree kinds of taller growth placed outwardly, with others of lower growth, and shrubs placed more or less forward, according to their degrees of height, proceeding on each side from the tallest trees behind, in a gradual order to the lowest shrubs next the walk.

And different parts of large pleasure-grounds may also be diversified with detached groves, clumps, groups, trees dotted singly, and by two, three, and several together, in various forms, with intervals of grass ground between, or some in rows along the sides of grand walks; the trees placed at some backward distance therefrom, with lower shrubs, &c. in front next the walk in the Shrubbery order, which in some places have in swelling curves towards the walk, others in backward sweeps inward, of different dimensions in imitation of a natural plantation, and in some places in large grounds may dispose a collection of trees in straight rows, in grand walks, and in the avenue order, leading

leading to some principal divisions, or to some garden building as a temple, &c.

Likewise in pleasure grounds have plantations of trees in woods, thickets, &c. in some places closely planted like a wood, in others more distant to form darker and lighter shades, for wood walks, shady walks, &c. with various kinds of shrubs, and wood flowering plants, placed in borders adjoining, and near the walks, with climbing and trailing shrubby kinds, planted to ascend upon the trees and shrubs, and some to creep on the ground in the order of nature.

In disposing the trees in the different plantations, may have some compartments intirely of deciduous trees, others of evergreens, and in some have principally deciduous trees interspersed with evergreens to make the greater diversity, and which will give the plantations a lively or chearful appearance in Winter, when the deciduous kinds are destitute of leaves.

And for ornamenting parks, or any principal out premises, plantations of trees in varied or differently diversified compartments have a fine effect: some in continued plantations round next the boundary of the park, &c. varying in width in a kind of natural order, in moderate projections and sweeps, &c. outward and inward, with openings at intervals, and with walks or rides through the plantation; having lower trees, or common shrubs next the walks, &c. likewise in the internal divisions, having trees of various kinds disposed in larger or smaller compartments, and in groves, clumps, groups, avenues, and in single or double ranges, some strait, others curved, or more or less bending, and in sweeps, &c. with sometimes trees dotted singly, or two, three, and several together in groups, varied in different situations.

Likewise have forest tree kinds planted along the borders, and in the corners of fields they will appear ornamental, shelter the ground, &c. and in time turn to advantage for lopping and timber.

With regard to the order and distance of planting in making the different tree plantations, the compartments designed for close planting in the shrubbery or thicketty order,

order, should be digged ; but for open planting in the grove, or in wide distances it may be generally grass ground, and in respect to the distances of planting, it should be varied in different degrees, from five, or six feet, to ten, twenty, or more, in some places may have compartments in imitation of woods and thickets, without any regular order of planting ; others may be more thinly disposed, and some planted in irregular and regular open and close groves on grass grounds, in rows, from ten, to fifteen, or twenty feet distance, and some planted to form avenues of twenty, thirty, to fifty, or a hundred feet wide, in considerable premises, with trees of different sorts, at ten, to twenty, or thirty feet distant in the rows.

Shrubberies are plantations composed of a variety of flowering shrubs, and the lower order of ornamental trees disposed in the pleasure-ground, both in detached clumps of various forms and different sizes along the sides of lawns, and other compartments of spacious grass spaces, and grand walks, as likewise in running plantations, extending along next the sides of lawns, grand walks, and the outward boundaries of the pleasure-grounds, park, fields, with serpentine gravel or sand walks, extending through the middle, or in front ; and for which shrubberies, a great variety of beautiful flowering shrubs and evergreens may be introduced ; in some places have clumps entirely of deciduous shrubs, others wholly of evergreens, in a sort of alternate order ; and have also some both in detached clumps, and running shrubberies, diversified with deciduous and evergreen shrubs together ; always having some of the most beautiful evergreens towards the front, conspicuous to sight, and to give the plantations a cheerful aspect in Winter.

As to the order and distance of planting in shrubberies, the ground for detached clumps particularly should be dug in a swelling manner, and for running shrubbery plantations, may either be level, or sometimes more or less sloping, and in both of which, the shrubs may be planted from four, or five, to six, eight,
or

or ten feet apart, in different compartments; in some places the more common shrubs may be planted in a thicketty order three, four, or five feet distance, others of the more conspicuous, and ornamental kinds should be planted at wider distances, from six, to eight, or ten feet; and always place the taller shrubs more or less backward, according to their growth, and the lowest towards the front in a somewhat regular gradation, and in some compartments permit the close planted shrubs to meet and cover the ground, in others, containing the more curious sorts, keep the shrubs to some regular order for the different species, &c. to appear distinct, in which they will have a more agreeable effect.

Relative to the culture of the shrub plantations in pleasure-grounds, those planted in compartments of dug ground should be kept clear from weeds by hoeing in Summer, and the ground digged annually in Winter, or Spring, till the branches of the trees and shrubs meet and overspread the surface; though where the shrubs are planted wide, keep the ground clean in Summer, and digged every Winter; and when designed to keep the shrubs in any particular clumps to distinct heads, they should be pruned occasionally to reduce any straggling or rambling shoots below and above, and clear out suckers from the roots.

In the general culture of the pleasure-grounds and flower garden, shrubberies, &c. all the borders, beds, clumps, and other compartments of flowers and shrubbery planting, should be neatly cleared and digged every Winter, or Spring, and the requisite supplies of plants, roots, and seeds of flowers, shrubs, &c. put in where wanted; and in Spring and Summer, all the compartments kept in the neatest order by hoeing and raking the borders, beds, clumps, and all shrubbery districts, the flowers, and other plants kept in somewhat regular growth by occasionally cutting and reducing the irregularities, and to give support of stakes to tall or long feeble, and all climbing plants, the edgings of box, &c. and hedges regularly clipped every Summer; the gravel
walks

walks kept always clean from weeds and litter, and rolled every week, especially in Summer; and in Spring, the gravel, where it admits, should be turned and fresh laid, or where they do not admit of turning, should be scuffled with a Dutch hoe, or loosened, and levelled regularly, raked and well rolled; and the grass lawns and walks should be kept close mowed in Spring, and Summer, occasionally poled to scatter worm cast earth both in Winter, and when necessary, and be frequently rolled, both to clean up scattered worm casts, as above, and to render the surface even, smooth, and firm, keeping also the edges of the grass close and even: all plants in pots frequently watered in Summer, and the more curious sorts moved to a warm situation in Winter, and in the Winter season, or Spring, all the shrubbery and tree plantations should have necessary pruning required, to cut out, or reduce irregular productions in shoots and branches.

Continue the several compartments always properly furnished with different sorts of flowers and shrubs, &c.
—For Instance,

A supply of annual flowers must be raised from seed every year, in the Spring.—See *Annuals*.

The biennial flowers, being raised from seed one year, flower the next, then either die or become dwindling; fresh supplies must also be raised every year from seed.—See *Biennials*.

Perennials, continuing several years in the same roots, and flowering annually, they only want renewal occasionally, as any old plants decay.—See *Perennials*.

Bulbous and tuberous-rooted flowers, being perpetuated by off-sets in many years duration, they should either be taken up annually, or once in two or three years, soon after the flowers decay, to separate the off-sets, and to replant the roots again in Autumn.—See *Bulbous Roots*.

Shrubs and Trees only want occasional renewal, as any casually fail.

H

F R U I T

FRUIT GARDEN DISPLAYED,

DESCRIBING THE DIFFERENT SORTS OF

F R U I T T R E E S,

WITH THEIR

Respective SPECIES and VARIETIES of FRUIT,

METHODS of PROPAGATION,

PLANTING, and GENERAL CULTURE.

FRUIT TREES being of much importance in a garden, both in affording great pleasure in beholding their growth, blossoming and fruiting, and considerable advantage in their respective productions of fruit, every garden, according to its extent, should be furnished with a proper supply, less or more, in wall-trees, espaliers and standards, as also plantations of standards in orchards, for the principal produce of the most useful fruits, both for present supply in Summer and Autumn, and for keeping in Winter and Spring, particularly of apples and pears.

In wall trees it is proper to have a collection of the more tender and choicer kinds of fruit, as peaches, nectarines, apricots, grapes, figs, with some best cherries, plums, and pears; but of the first five mentioned sorts, they always require the assistance of walls to ripen the fruit in good perfection, as being more tender than any of the other kinds, and should principally have southerly walls full to the sun, otherwise the fruit will not ripen with a good flavour, and some not ripen at all without that aid: though some sorts of apricots, as the Brussels and Breda kinds, will ripen in

low

low standards, and in Espaliers, as also some forward kinds of grapes and figs will ripen fruit in the espalier order trained to stakes and rails, &c. and as to cherries, plums, and pears, although all the sorts will ripen effectually in standards and espaliers, as hereafter explained; yet, by allowing some of the choicer kinds the advantage of south and other walls, we obtain the fruit earlier, larger, and with an improved flavour.

For wall trees having not only an advantage of a warmer situation, but by their branches being trained thin, and in regular order, four, five, or six inches distance; they always produce fruit in the greatest perfection both in size, beauty, and good flavour.

Wall trees consist of common or dwarf wall trees trained with short stems, six or eight to ten or twelve inches, that the branches may come out low to cover the wall regularly from bottom to top; half standard wall trees with stems three or four feet high, the branches coming out at that height, and to plant occasionally between the common dwarf wall trees to cover the upper part while the dwarfs are advancing below; and tall standard wall trees, with stems of five or six feet, or more, the branches commencing at that height from the ground, and are sometimes planted against high walls between the dwarf trees and half standards, to occupy the uppermost part of the wall a few years till the others advance sufficiently, are then either pruned up by degrees to give room for the others, or removed entirely away; and these tall standard wall trees are also planted occasionally against the ends of buildings, &c. in exposed places, that by elevating the head of branches a considerable height from the ground, the fruit is more out of the reach of being gathered by strangers, or other persons who have no right to the product.

But in planting wall trees, always plant the common or dwarf kinds for the principal continuing residents, at from fifteen to eighteen or twenty feet distance according to the different sorts, as explained under their respective heads, and between the dwarfs, half standard

wall trees may be planted where thought eligible, to have all parts of the walls occupied as expeditiously as possible; and in all of which the branches should be trained in a fanned spreading order, extending to the right and left, and trained horizontally to the wall, in the most regular order, four to five, or six inches distance, some double that, as in the grape vine; and will require to be pruned every year in Summer and Winter, to preserve the regularity of the tree, and from being too crowded with useless wood.

Espalier trees are such as are trained to a trellis of stakes and rails in a fanned spreading manner, in the order of wall trees, and extended till the branches of the different trees meet, forming a sort of hedge, and are designed for producing some of the choicer sorts of hardy fruits in the fullest perfection, particularly apples and pears, and sometimes plums and cherries, mulberries, and medlars, &c. and as the branches are extended in a straight range, long ways a border, they take up no room, bear on both sides, as well as appear very ornamental in a garden, and afford some shelter from cold winds to the interior quarters of the ground.

These espalier trees are always trained with dwarf or short stems like the common wall trees, to have the branches commence near the ground, that they may cover the trellis work, or stakes and rails in a regular expansion from the bottom upward, four to five or six feet high; and on which the branches are arranged horizontally, four to five or six inches asunder, one above another.

The espaliers are planted in a single range, commonly in the outward borders surrounding the quarters of the kitchen garden, or other garden districts, in the border next the walks, having the borders four to six or eight feet wide, the trees planted four to five or six feet from the walk, and fifteen to eighteen or twenty feet asunder in the row; and for which may either place a regular espalier or trellis of stakes, or posts and rails; or only for the present some stakes placed a foot apart, as far as the trees extend, and in their advanced growth erect a full trellis work, either of tall stakes driven

driven into the ground a foot asunder, and four and a half or five feet high, but never above six feet, and a rail nailed along the top; or have an espalier regularly framed the same height, having three or four ranges of rails extending long ways, with small cross-bars twelve to fifteen or eighteen inches apart: and to which trellis work, in either method, the trees are trained with regularity; the branches extended horizontally, four to five or six inches asunder, fastened neatly either with shreds and nails, or tied with small pliant osier twigs, or old tarred rope yarn: and the trees will require pruning every year, in Summer and Winter, to cut out the superabundant and irregular wood, to preserve them regular and fruitful,—as directed for their respective sorts under their proper heads.

And standard fruit trees consist of common full standards, half standards, and dwarf standards.

The full standards are those which are trained with a tall single stem six or seven feet high, the head of branches commencing at that height, extending all round in full growth, and are most commonly of the hardy and most useful sorts of fruit, to produce the principal crops for general supply, as apples, pears, cherries, and plums; also mulberries, medlars, quinces, services, walnuts, chefnuts, &c. and should be planted in considerable quantity, according to the extent of garden ground, and in orchards; but more considerably of apples and pears, as the most valuable useful fruit, but most of all apples; also tolerable supplies of cherries and plums, a few trees of mulberries, medlars, quinces, plenty of walnuts in large orchards, parks, &c. and some sweet and wild services planted in gardens, &c. the apples, pears, twenty-five or thirty, to forty or fifty feet distance; the cherries and plums, twenty to twenty-five, or thirty feet; the same distance for quinces, medlars, mulberries, and services; and walnuts and chefnuts, in extensive premises, thirty or forty to fifty feet distance; and in all of which the standard trees permitted to branch out in their natural order, only cutting out any irregular placed and cross-growing branches and dead wood.

Half-standard trees are trained with stems three to four or five feet high, the branches beginning at that height, and for which some are grafted on dwarf-stocks, or those that are but of a moderate growth, as apples, on codlin stocks, pears sometimes on quinces and medlars, to have them with moderate heads for small gardens, or that, as the branches come out lower than common standards, they may not extend considerably to overspread the ground; and, on that consideration, the half-standards, at any rate, are not so proper as the full standards for general planting. They may, however, be admitted moderately, in any desirable sorts of fruit-trees, to admit of gathering some of the fruit more readily, without climbing; and in which may have apples, pears, plums, cherries, mulberries, filberts, quinces, medlars, &c. all permitted to branch in their natural order, agreeable to the intimations mentioned for the full standards.

Dwarf standards are raised with low stems, one to two or three feet high, all generally grafted or budded on dwarf-stocks, as apples on paradise and codlins, pears on quinces, &c. to have them grow with small heads, commencing at one, two, or three feet from the ground, and always continuing of a moderate growth of three or four feet extent, proper to admit in small compartments, or in borders, &c. and will bear very agreeably; the fruit large and abundant, according to their extent of branches, and which can always be readily gathered.

These dwarf standards may be of any kinds of the choicest fruits, as some principal apples, pears, plums, cherries, apricots, figs, dwarf peaches, filberts, &c.

They are trained, some with concave or hollow heads, the branches pruned out in the middle, the outward branches continued in a somewhat circular order; others are trained convex, or full heads, with an advancing upright leader in the middle, branching out sideways all round; and some are permitted to branch out from the bottom, in a natural order, and cutting out very irregular branches; and in all of which they may be planted in any principal borders, next main walks,

walks, in a row ten to fifteen feet distance; the branches suffered to advance in their full growth, without shortening, except any that assume an irregular direction, or extend out too much in length beyond the others of the general expansion, or to prune out any casual ill-placed productions, or branches growing across the others in an irregular manner.

The foregoing being the different orders in which fruit-trees are generally and occasionally trained, they, for these purposes, are propagated or raised by different methods, as grafting, budding, layers, cutting, suckers, according to the different species of trees, which is explained for each sort under its proper head; observing, in general, that in propagating by grafting and budding, the graft and bud of the respective trees intended to propagate, are inserted into the stock or stem of young trees of the same family, raised from seed and suckers, &c. and for this purpose are commonly called stocks; and which, for common wall and espalier trees, are grafted or budded within six or eight inches of the ground, to obtain lower branches, forming a regular expansion, to spread the wall and espalier regularly from the bottom upwards; and for half and tall standard wall-trees, the grafting, &c. is performed on tall stocks, at from three or four, to five or six feet, to elevate the head to cover the upper part of the wall; and for detached full standards, they are grafted or budded on high stems at six or seven feet, and detached half-standards at two or three, four or five feet high; and for dwarf standards, they are grafted, &c. within a foot of the bottom of the stock. The same must be observed of trees raised from suckers, layers, cuttings, &c. training them with low or tall stems, according to the different purposes intended in wall-trees, standards, &c. to have the branches come out lower or higher.

The trees raised as above, for the different orders of training, in standards, wall-trees, and espaliers, should be formed in their infant growth, &c. in the first and second years shoots of the head, by pruning them down

to a few eyes, especially wall and espalier trees, to force out several later shoots near the stem, to give the head its first requisite form below, and be as a proper basis for furnishing all the other branches advancing in regular order upward.

This heading down in young year-old fruit-trees, for walls and espaliers, is particularly necessary, and occasionally for standards; and for all of which it is more particularly eligible in such young trees, as above, as advance with only a single main shoot from budding, as is common in peaches, nectarines, apricots, and sometimes plums and cherries, &c. or also in grafted young trees with only two or three naked shoots; and which first shoots, in either case, should in March following, when a year old, and just as they begin to push, be cut down to five or six eyes, or within six or eight inches of the bottom; and they will thus send forth laterals from the remaining lower eyes, to form the head as above. The same may also be practised for standard trees of all sorts, to gain a first regular set of branches; and occasionally, in some sorts of wall and espalier trees particularly, if the second year's shoots produced from the above heading down, are not fully sufficient to form a proper bottom expansion, as a foundation for furnishing all the others, these should also be pruned to a few eyes in Spring; and from which there cannot fail of being enough produced in Summer, to give the head a regular formation. Afterwards, the several sorts of wall and espalier trees are to be pruned, requisite for all wall-trees and espaliers. And standard trees, after the head is thus formed, permit them to branch mostly in their natural order, requiring only occasional pruning, probably but once in several years, as the heads have full scope to branch out all around.

The above work of heading down or pruning the first main shoot, will also sometimes be necessary in trees raised from suckers, layers, cuttings, when the stem aspires or runs up naked, without furnishing laterals in the proper parts to form the beginning head sufficiently,

either

either for wall-trees, espaliers, and standards, agreeable to the foregoing intimations.

But all sorts of fruit-trees may be had, ready raised, at the public nursery gardens, for planting as required, both in their young unheaded state with the first shoots, or such as have been headed, and, in consequence thereof, furnished and trained with a head of several shoots or branches; and some that are fully trained in a good expansion, and attained a bearing state, to produce immediate fruit at the proper season.

Most of the sorts of fruit trees will prosper in any good mellow ground of a garden, or that of fields, &c. in which to plant orchards of standards.

The general season for planting, is either at the fall of the leaf, end of October, or any time in November, also December, &c. in open mild weather, or in February or March. Should be taken up with good roots in a full spread, and planted as soon after as possible, before the small fibres dry or shrink. Prune any broken roots, and long straggling ends thereof, and irregular shoots of the head; and then, in the allotted places, proceed to plant them for wall-trees, espaliers, standards, at distances directed for the different sorts, under their proper heads.

As all wall-trees and espaliers require an annual pruning, every Summer and Winter, it should be performed according to their different orders of bearing, which in some sorts is upon small spurs, or short thick young shoots, an-inch or two long, as in apples, pears, cherries, plums, &c. arising all along the sides of the two, three, and several years old branches, and at the extremities, which determines that in the general course of pruning, it is improper to shorten the branches and shoots that are designed for bearers; and as the same branches continue several years fruitful, they must be retained accordingly. And in other species of trees, they bear principally on the young year old wood, as in peaches, nectarines, apricots, figs, grape-vines, a general supply of each year's shoots must be left in Summer and Winter, for successive bearing; and in Win-

ter pruning, a proportionable part of the former year's bearers, and old naked wood, cut away, as also the superfluous or over abundant, and all ill-placed young shoots, to make sufficient room to train in the proper succession supply of the new bearers, in regular order, to produce the crop of fruit the ensuing Summer: and generally, as the same shoots both produce the fruit, and the supply of shoots for bearing the succeeding year, it is proper, in the aforesaid Winter-pruning, to shorten the reserved shoots (except the fig) to promote their furnishing more effectually a lateral production towards their lower parts in Summer, to train in at full length all that season, to chuse from in Winter pruning again for successive bearing, as explained under the proper articles; but as the fig, in particular, bears towards the extreme part of the shoots, they must not be shortened, especially as these trees always produce supplies of young wood abundantly, in proper situations, without the precaution of shortening.

Having thus far exhibited some necessary general remarks, relating to the different orders of training fruit-trees, and the particular and general merits of each method, and of the most proper species of fruit eligible in the several ways of training, and other introductory particulars,---next follows the arrangement of the several species of trees, and their respective varieties of fruit, their different ways of propagation, order of planting, pruning, and general culture.

A P P L E S.

APPLES being very valuable fruit, both for eating and many principal culinary uses in baking, boiling, &c. almost the year round, and for making cyder, the trees merit culture in great abundance in standards, and espaliers, according to the extent of the garden and orchard, &c. consisting of the following varieties of the fruit:

Jenneting.

Jennetting, or June eating apple	Lawman's Apple—
Margarate Apple Codlin	Norfolk Storing
Dutch Codlin—	Summer Stubbard—
Kentish Codlin—	Fearn's Pearmain
Golden Rennet	Kitchen Rennet—
Golden Pippin	Red Colvil—
Summer Pearmain—	White Colvil—
Summer Queening—	Grey Leadington—
Royal Pearmain	French Pippin—
Loan's Pearmain	Quince Apple
Nonfuch	Transparent Apple
Holland Pippin	Gilliflower Apple—
Royal Russet	Lemon Pippin
Aromatic Russet—	Kirton Pippin
Golden Russet	Pomme Du Roi
Nonpareil	Spitsenberg Apple—
Grey Russet—	American Apple—
Monstrous Rennet	Glory of the west—
Wheeler's Russet	Red-streak
Kentish Pippin	Norfolk Beesing
Cat's Head	Two-year Apple—
Margill Apple	Fig Apple
Hervey's Pearmain—	Siberian Crab (curious in its remarkably small fruit)
Queen Charlotte Apple—	Paradise Apple (of most dwarfish growth).
Herefordshire Pearmain—	
Newton Pippin	

The above being the principal, and generally known varieties of apples cultivated in the nurseries, and of which to make a selection of the most approved, or best varieties for planting, both to produce necessary supplies for kitchen uses, and dessert or eating apples, and large quantities for making cyder; and for which occasions, they are most desirable fruit to have in considerable plenty in every garden and orchard, in proportion to the extent of ground; always allotting larger plantations in full standards, and a portion of principal sorts in espaliers; or may also have some finest

finest eating kinds planted against south and other walls, as golden pippins, &c. to ripen earlier with improved flavour. That for the general planting, have different varieties, in Summer, Autumn, and Winter kinds, to obtain them for use the year round, growing to a proper size to gather from June or July till October, in young, middling, and full growth, for present eating; and the late or Winter Apples attain full maturity for general gathering in October, to house for keeping good all Winter and Spring, or till next Summer in some latest sorts. In the general collection, always have plenty of codlins for early and principal use in Summer and part of Autumn, especially for various culinary occasions, till the other sorts attain proper perfection.

All the varieties of apple-trees bear their fruit upon small side and terminal spurs, or short thick shoots, half an inch to an inch or two long, arising naturally at the sides and ends of the two, three, and several years old branches; and the same spurs and branches continue many years in a fruitful state.

Apple-trees are propagated or raised principally by grafting the approved or desirable varieties upon young stocks, raised from the kernels of any sorts of apples, or occasionally from suckers, especially of codlins, &c. and, when they are from a quarter or half an inch to an inch thick, are of proper size for grafting, which is performed in the Spring, in February and March; observing generally, for full standards, to graft upon tall stocks, at six or seven feet height; half standards, at three to four or five feet; and dwarf standards at from twelve to eighteen inches, or two feet; and for espalier trees, always graft low, at six or eight inches from the ground. That, when required to have half and dwarf standards to advance in moderate growth, and sooner become bearers, they should be grafted upon codlin stocks; or the dwarf standards may be grafted upon Paradise, or Siberian crab-stocks, to have them of the most dwarfish growth for small compartments: likewise

for espalier trees, may graft some upon codlin stocks, to have them of moderate growth, or occasionally upon Paradise stocks, &c. to dwarf them more considerably for small gardens, or as may be required.

For in raising stocks for grafting, it should be observed, that those raised from the seeds of kernels or crabs, or any kinds of apples, are generally strong shooters, hence are commonly called free stocks, and the trees grafted thereon always assume a stronger free growth in proportion, and are principally used for full standards, or occasionally for espaliers, where they can have proper scope to extend in full growth; and the codlin and Paradise stocks, &c. being moderate and dwarfish growers, are calculated to moderate or dwarf the growth of the trees accordingly.

But some sorts of apple-trees, as codlins particularly, are occasionally raised without grafting, sometimes by planting suckers from the root and sides of the stem; also by cuttings and layers of the one, two, or three years old branches,--all planted in February or March.

Though it should be observed that the above, and apples in general, as well as most other sorts of fruit-trees, when raised from grafting and budding, always sooner commence good bearers, than others raised from suckers, &c.

For the general methods of training them for standards, espaliers, &c. see the former part of this division (*The Fruit Garden displayed.*)

When the young trees, raised as above, by grafting, &c. are advanced in their first heads, of three, four, or several branches, of from two, three, to four, five, or six years growth, they are proper for final transplanting, or planting where they are designed to remain.

Or young ready raised trees, of all the choice varieties of apples, may be had at the nurseries, either of one, two, or three years growth, or such as are advanced with a full head of branches to a bearing state to commence immediate bearers.

All the sorts may be planted in any common soil of a garden, or good field land; and in any situation not excessively wet, or subject to inundations in Winter.

The season for planting apple-trees, is either in Autumn, towards the latter end of October, or any time in November or December, &c. in open weather, or in February and March.

For the principal supply of apple-trees, generally allot plenty of standards in gardens and orchards, &c. planted at twenty or thirty, to forty or fifty feet distance; and in their growth, permit the general branches to advance mostly in their natural order, in a regular expansion all round, not shortened, except where any advance in a rambling or very irregular growth; and in other pruning, they will only require it occasionally, to cut out any cross-placed or very crowded branches and dead wood, to be performed principally in Winter.

Where there is room for orchards, or any considerable plantations of standards, never omit planting abundance of the best varieties, both of eating and kitchen apples; as well as plentiful plantations in orchards and hedgerows, &c. for cyder.

Half-standard apples may be planted in smaller supplies, or as may be required for small gardens or others, agreeable to the observations before intimated,—planted twenty or thirty feet asunder.

Likewise dwarf-standard apples may be introduced in borders and other compartments, fifteen or twenty feet distance.

In espaliers, it is eligible to plant a principal portion of the choicest kinds of apples, at fifteen feet distance those grafted on dwarf stocks; and on free stocks, eighteen or twenty feet asunder in the row; and, in all of which, train the branches horizontally to the trellies, &c. four to five or six inches asunder, in a regular expansion, not shortening any, but continued all at their full length, as far as there is room to extend them, as, from their nature of bearing, apple-trees do not admit of shortening, and is only to be practised

occa-

occasionally, where the shoots extend beyond their limited bounds, or in any very irregular growth, or to prune casual decayed ends of shoots, &c. For, as before observed, the varieties of apples in general are all of the spur-bearing kinds: that is, they produce their fruit from short natural spurs, being robust short shoots of half an inch to one or two inches long, rising naturally at the sides and extreme parts of the branches, when from two or three to many years old, more especially if the branches are not shortened; as shortening not only destroys the extreme bearing part of the branches, but occasions their pushing forth strong lateral wood shoots below, in the places where the side natural fruit-spurs would otherwise appear, and thereby retard their bearing; which therefore determines, that in the general or occasional pruning of these trees, in espaliers, &c. the shoots and branches that are designed for bearers, should not be shortened, but permitted to extend in length as far as they have room; and they will thus advance in moderate growth, and gradually form cufsons, or fruit spurs, along the sides and at the extremity; and the same branches and spurs continue many years fruitful; and when any spurs decay, or become old and worn out, they being cut away, new ones are often acquired in their places to succeed them, so that these trees, in common pruning, in espaliers, &c. only require renewals of young wood occasionally.

Pruning of apples is required in standard trees only occasionally in particular irregularities; and in espaliers, a general pruning is necessary every year, to cut out the superabundant and ill placed shoots of each year, unserviceable old wood, and to train in supplies of young where wanted—as directed below.

The espalier apples require pruning every Summer and Winter.

The Summer-pruning is necessary to regulate the shoots of the year, produced numerously more than is necessary; for as the trees continue bearing many years

years in the same branches, they only require occasional supplies of young wood, therefore, beginning the Summer pruning in May or June, cut away all fore-right and other ill-placed shoots, and thin out the superfluous or over abundance of the others, retaining only some well-placed side-shoots in the most vacant parts, with a leader to each branch, and trained in wholly at their full length, till Winter pruning.

The Winter pruning commencing in November, December, &c. till March, consists of a regulation among the general branches, young and old; observing of the young shoots of last Summer, to retain only what may be required, of the well-placed, to supply vacant parts in young or old trees, continuing a good terminal or leader to each branch, where room to extend them; and cut all the rest clean out, close to the old wood. and in the older branches, where any casually appear of an ill growth, worn out, unfruitful, or decayed, cut them away, retaining young to supply their places, either cutting them out clean to the bottom or to some lateral young branch or shoot, as may seem expedient; and if any branches are too crowded, or very irregular, cut them out, or prune them, agreeable to the above hints, being careful to preserve all the natural fruit-spurs, but cut off all unfruitful stumps and snags, and casual decayed spurs; and in pruning out the unnecessary shoots, always cut close, not to leave any bottom snag, which would shoot from every eye the ensuing year in useless productions; observing likewise to preserve all the retained requisite shoots at their full length, as far as the allotted limits of the trees admit; and nail and tie the whole, in regular order, to the trellis of the espalier.

Any apples trained in wall-trees, require the same annual pruning as advised for the espaliers.

Pruning standard apples is only required occasionally, as before observed, when any considerable irregularity occurs, such as in cross-placed or any confused growth in the branches, or where any are greatly crowded, to prune some out in a regular thinning order; or to reduce

any

any long rambling and low straggling branches : also to cut away casual strong upright crouding shoots in the middle of the head, and suckers from the stem and root.

The fruit in the different varieties of apples acquire a proper growth to gather for use off the trees in Summer and Autumn, both for various culinary occasions, as in codlins and several others ; and in their advanced and mature growth, many sorts are also proper to gather in Autumn, for immediate eating ; and many sorts of Autumn apples are proper to gather in full growth in September, for keeping a short time, till the late kinds for Winter attain maturity, the end of September and in October.

The late kinds of apples acquiring maturity the end of September, and in October, as before observed, are valuable for their property of long keeping, and generally superior goodness, should be gathered according as they attain perfection, some for present supply, larger portions for keeping, and some for making cyder, where required, and that there are considerable quantities of the fruit for that purpose.

The mature growth of apples on the trees is generally discoverable, some by their full size and changing yellowish, others not changing colour, which, and apples in general discover full growth, by their easily quitting the tree when plucked, and by their frequently falling ; and of which all those intended for long keeping should be gathered by hand, that they may not be bruised, as would unavoidably be the case, if shaken down ; observing generally to gather them principally when quite dry.

According as gathered, house them in dry close apartments, and the keeping kinds closely covered with dry straw a foot thick, to exclude the damps and external air, whereby they will keep longer sound and good, for Winter and following Spring, and some till Summer, examining them occasionally to pick out such as decay or rot.

P E A R S.

P E A R S.

PEARS are of many fine varieties both for dessert or eating fruit, in Summer, Autumn, and Winter, continuing good till the Spring, and many large sorts for several culinary occasions; and the trees should be planted plentifully in all gardens, that are of proper extent, both in standards, and against walls, and espaliers; the varieties of the fruit consist of Summer, Autumn, and Winter pears, as in the following lists:

SUMMER PEARS, *or such as ripen in July, August, and September, for immediate eating off the trees.*

Primitive

Little musk
Red Muscadine
August Muscat
Green Chiffel
Jargonelle
Cuisse Madam, or
Windfor
Blanquette
Catherine Pear

Orange Muscat
Orange Bergamot
Summer Bergamot
Summer Bonchretien
Green Cassalet
Prince Pear
Great Russelette
Rose Water
Lord Cheyne's Green
Musk Blanquette

AUTUMN PEARS, *or such as ripen in September, and beginning of October, for eating off the trees, and keep in October, and November, after being gathered.*

Autumn Bergamot
Gansel's Bergamot
Brocas's Bergamot
Hamden's Bergamot
Auchen Pear
Verte Longue
Brown Beuree

Red Beuree
Grey Beuree
Swan Egg
Green Sugar
Marquis Pear
Messire Jean
Grey Good-wife

WINTER

WINTER PEARS, *such as attain full growth, for gathering in October, and housed, ripening for eating as they lie in the fruitery, in November, December, January, till March, April, and May.*

Cresan	German Muscat
Colmar	Best Chaumontelle
Virgoleuse	Chateau du Roi Berga-
St. Germain	mot
Winter Bergamot	Wonder of Winter
Brown Beuree	Seven Elbowed
Broca's Bergamot	Skinless Pear
Spanish Bonchretien	Winter Thorn
Winter Bonchretien	Easter Bergamot
St. Martial	Dry Martin
Holland Bergamot	Terling Pear
Musk Robine	Carlise Pear
Trumpet Pear	

PEARS, *chiefly raised for baking, and other culinary purposes ; mostly large.*

Great black Pear of Worcester, or Pound Pear	Uvedales St. Germain
Cadilac	Blood Pear
	Double Fleur

Pears being very desiræable fine eating fruit in Summer, Autumn, and to keep for Winter, and for baking, stewing, &c. and making perry, the trees should be admitted in all places where room, in different varieties, both to plant plentifully in standards of the several sorts for producing the main supplies as most of the sorts attain perfection on standards, but to have earlier and finer fruit with improved flavour, it is proper to have some principal varieties both of Summer, Autumn, and Winter kinds in espalier and wall trees, and of the latter, have always some best Winter pears on south,

and

and west, or easterly walls, to attain all possible perfection.

All the sorts of pears bear upon small natural spurs of an inch or two long, arising at the sides and ends of the branches of three or four to many years old: therefore, in pruning, remember the branches must not be shortened.

The trees are raised by grafting and budding them upon any kind of pear stocks, raised from seed or suckers; and upon quince stocks, to dwarf the trees for espaliers and walls, where required to have them in moderate growth for these purposes; the grafting is performed in the Spring, in February and March, and the budding in July and August.

In the grafting and budding them, have tall stocks for the full standards, to be grafted and budded at six or seven feet height; half-standards, at three to four or five feet; dwarf standards, one or two feet; and for wall and espalier trees, bud and graft on low stocks, at six or eight inches from the bottom; and when they advance in shoots and branches, train the trees for the different purposes intended, for standards, walls and espaliers; the standards permitted to branch out above, regularly all round; and in the wall and espalier trees have the branches trained in a fanned expansion to the right and left.

When the trees, from grafting or budding, have formed heads from two or three, to five or six years growth, they are proper for transplanting where they are to continue.

They will all succeed in any common good ground, not immoderately wet in Winter, &c. If a moderate loam, the better.

The season for planting them, is any time, in open weather, from the fall of the leaf in October or November, till the end of March, or beginning of April.

The full standards plant in gardens and orchards, twenty-five or thirty, to forty feet distance: the heads permitted to branch out freely on every side, and above, not shortening the branches; and give only occasional

occasional pruning sometimes in Winter, to cut out any ill-placed, cross-growing, and crowded branches, and dead wood.

The wall and espalier pears plant fifteen to eighteen or twenty feet distance; though pears grafted on free or strong growing stocks, often extend thirty feet or more. Train the branches to the wall and espalier horizontally, in regular order, four to five or six inches distance, all extended at their full length, and never shortened, where there is sufficient scope to run them; and they will thus, in their full extension, produce bearing spurs all along the sides to their extremities, and the same branches and spurs continue many years in full bearing. But the wall and espalier trees will require an annual pruning in Summer and Winter, to cut out the superfluous or over-abundant young wood, fore-right and other ill-placed shoots of each year, with ill-growing and unfruitful old branches, and dead wood; at the same time to retain and train occasional requisite supplies of young shoots in vacancies.—Observing the same method as directed for apples.

Pears ripening for eating off the trees, in July, August, and September, should be gathered accordingly as wanted, before too ripe and mealy; and late ripeners, the end of September, and in October, should be gathered in those months for keeping, becoming mellow as they lie, in October, November, December, till next Spring; laying them in the fruitery upon shelves, or where convenient, and close covered with dry straw a foot thick, as observed of the apples, examining them occasionally, to draw out such as decay.

C H E R R I E S.

CHERRIES are fine Summer fruit, valuable for their early maturity, and juicy refreshing quality in hot weather, ripening from May and June till August and September, in the different varieties, both as table fruit,

fruit, and for many culinary purposes, in pies, tarts, &c. and cherry brandy; and therefore the trees should be admitted plentifully in the fruit-tree collection, both in full and half standards, and in principal wall trees; and some occasionally in espaliers, consisting of the following varieties of the fruit:

Early small May
Cherry
May Duke Cherry
Archduke
Harrison's Heart
Black Heart
White Heart
Bleeding Heart
Amber Heart
Ox Heart
Carnation Cherry

Kentish Cherry
Lukeward
Morello
Turky Heart
White Croffian
Black Corroune
Small wild Black
Small wild red
Large wild red, or
Greens.

All the sorts of Cherries ripen very well on standards; but it is also proper to have some early and principal sorts upon walls of southerly and other exposures, to obtain earlier fruit, and in fullest perfection of size and flavor; and some planted upon north walls, to ripen late in equal perfection, especially in size. However, never omit having a good collection in standards, according to the dimensions of the garden, and very profitable to plant in orchards for sale; and have a portion of the best for walls. And they may be occasionally planted espaliers.

Cherries bear the fruit both on the young wood of a year or two old, and principally upon small natural spurs or cufsons half an inch to an inch long, proceeding from the sides and ends of the branches of one, two, to three, four, and several years growth; and the same branches continue many years fruitful, furnished with spurs quite to the extremity thereof, therefore the branches must not be shortened, where room to extend them in length.

They

They are raised both in full and half standards, and with dwarf stems, for walls and espaliers, or occasionally in small dwarf standards.

The trees are propagated by grafting and budding the desired sorts upon stocks raised from the stones of any sort of cherries, or occasionally, stocks of the small May, Morello, and bird cherry, to dwarf or moderate the growth of particular sorts, the grafting being performed in the Spring, and the budding in July; and when the shoots from either or both advance in the first two or three years growth, train them as required for full and half standards, dwarf standards, and for walls. Those for standards permit to extend their branches all round above into full heads; and for walls and espaliers, train them in a fanned expansion, the branches extending horizontally from two sides, in a spreading order, cutting off fore-right projecting shoots.—See the previous General Directions.

After the budding and grafting, they bear in two or three years.

They may be planted in any common good garden ground; and the same in orchards and hedge-rows, &c. for standards: and the season for planting is the middle or latter end of October, any time in November, &c. or in February and March.

The standards plant twenty to thirty feet distance, and permit them to branch out in their natural growth, without any other pruning than to cut out any very irregular growing branches, or to thin out some, where confusedly thick, and decayed wood.

For wall trees, plant some early May cherry, a larger portion of the May-duke, arch-duke, and other duke kinds, Harrison's and other heart cherries, carnation cherry, and a good supply of morellos, as room of walling admits: some of each on South walls, for early and well-flavoured fruit; others on West and East walls, to ripen large fruit, in succession; and some on North walls, for latest fruit, particularly of the morello, to continue till September, &c. planting the trees of the several varieties about fifteen to eighteen feet distance, and

and the branches trained in principally at their full length, horizontally, three to four or five inches asunder; and, according as they extend in length, lay them along accordingly, without shortening: and the trees will require pruning every Summer and Winter. A Summer pruning to displace the ill-placed and superabundant young wood of each year; and a Winter pruning, to make any necessary regulation among the principal branches, where any is in a bad state, unfruitful or decayed, and to leave young supplies where needful: and to prune out the unnecessary and useless shoots, &c. observing in the morello cherry particularly, as it bears on the young wood, to leave plenty of the last Summer's shoots.—After pruning, let all the branches be regularly nailed, still in their full growth, and they will furnish bearing spurs, in continuation to their extremities.

Likewise in espaliers, some may be planted of different varieties, and managed as above for the Wall Cherries.

For forcing—to obtain earliest fruit, Dwarf and half standard duke-cherries, that are arrived to a bearing state, are planted in forcing-houses, and in pots placed therein, to ripen cherries in March and April, &c. beginning the forcing the end of January, or beginning or middle of February, by moderate fire-heat in the flues every evening till nine or ten o'clock, and in cold mornings, sometimes watering the borders or pots.

P L U M S.

P L U M S furnish a great variety of fine eating fruit, and for tarts, pies, and preserving, all plentifully, both in standards, and in wall trees, for earlier and finer fruit of larger size, and well flavoured, ripening in the different varieties from July and August, till September; consisting of the following principal sorts:

Early

Early Morocco	Imperatrice
Early little black Damask	L'Mirabelle
Early Tours	Maitre Claude
Azure Hative	White Matchless
Great blue Damask	White Prunella
Orleans Plum	Royal
Green Gage	Brignole
White Perdrigon	Drap D'or
Black Perdrigon	Diapre
Blue Perdrigon	Turkey Plum
Fotheringham	Myrobalan
White bonum magnum, or Egg Plum	Cheston Plum
Red bonum magnum, or Great Imperial	Roche Courbon
Blue Gage	Damson
Queen Claude	Muscel Plum
Cherry Plum	St. Julian Plum
Apricot Plum	Black Bullace
Violet Plum	White Bullace
	Sloe, or small black wild Plum

The varieties of plums are various in size, shape, and colour, some being small, others middling and large, round, oval, oblong, &c. and in colour, black, red, white, yellow, green, blue, very desirable Summer, and Autumn fruit, juicy, and refreshing to eat, some of a very rich delicious flavour, and a collection of the most approved sorts should be introduced in gardens and orchards, both in standards, and some principal kinds in wall trees, against south, and other walls, to obtain the fruit earlier, and of improved growth and flavour, also some in espaliers.

The various sorts of plum trees bear on small spurs, emitted along the sides, and at the ends of the branches of two, three, to several years old, and the same spurs and branches continue long fruitful, and as they furnish bearing spurs quite to the extremities, they must not be shortened.

The trees are propagated by grafting or budding the sorts required upon any sort of plum stocks raised from the stones of the fruit, or suckers from the roots of the trees, training them with tall stems, in which to graft or bud, at five or six feet for full standards, and for half standards at three or four feet high, and smaller stocks for wall and espalier plums to graft or bud them within six or eight inches of the ground; and when they advance in shoots and branches, train them for the different purposes intended in standards and wall trees, as observed for pears and cherries; they will begin to bear in three, four, or five years; and when of from two or three to four, five, or six years old from grafting and budding, they may be transplanted where they are finally to stand.— *See the previous General Directions.*

They will all succeed in any common garden earth, and in orchards, &c.

Plant the standards at twenty to thirty feet distance; let them branch out above into full heads, and only prune occasionally any cross-placed and irregular branches, or to cut out some thinningly where crowdedly thick, and casual decayed wood, permitting the general proper branches to advance in their full growth.

Wall trees of plums should be planted, some principal varieties against south walls for earlier fruit, and in best perfection in size, and richness of flavour, others planted on east and westerly walls, &c. to ripen fruit in succession; and the whole have the branches trained horizontally to the wall four or five inches asunder, and all principally at their natural or full length, that they may produce fruit spurs plentifully to their utmost extent, agreeably to their natural order of bearing before explained: and that to preserve them regular and fruitful, they must be pruned every Summer and Winter: in Summer, to cut out the superfluous or over-abundant young wood, and fore-right and other ill-placed shoots of the year; the others retained, not shortened, and nailed in close: and in the Winter pruning, observe, that as the same branches, when of a bearing state,

continue

continue fruitful several years, they must be retained, and only such as casually become of an unfruitful nature; &c. cut out, and young shoots reserved to supply their places, and in vacant parts, with a leading shoot to each branch, cutting out all the others, as explained for Apples and Pears: the retained shoots left intire, and the whole nailed in regularly.

Plums may also be planted in espaliers, and managed as above.

Early plums are obtained by having some of the choicest forward sorts planted in the borders of a fruit forcing stove, and managed as mentioned for early cherries and peaches in forcing houses.

P E A C H E S.

PEACHES are choice kinds of stone fruit, of many fine varieties, all of a tender nature, that the trees are always trained against warm south walls in the full sun, both for the protection of the blossom, and young fruit appearing early in the Spring, and to forward the fruit in its advancing growth to ripen in good perfection, and peculiar rich flavour, as they will rarely ripen well on standards or espaliers; especially as several sorts do not ripen till late in Autumn; they ripening in the different varieties from July and August till the end of October, and consist of the following sorts:

White small nutmeg
Peach
Red nutmeg Peach
Early Anne
Early Mignon
White Magdalen
Red Magdalen
Early Newington
Old Newington
Early Purple
Montauban

Nobleſſe
Large French Mignon
Chancellor
Belle Garde
Admirable
Royal George
Vanguard
Yellow Alberge
Golden
Incomparable
Belle de Vitri

Swalsh
 Rombouillet
 Hoxton Mignon
 Rossana
 Bourdine
 La Teton de Venus
 Nivette
 Sion Peach

Portugal
 Belle Chevreuse
 Perisque
 Monstrous Pavy
 Late Admirable
 Catharine, or October
 Peach
 Dwarf Orleans Peach

As many of the above different varieties of peaches were originally obtained from France, the French names are still retained, and by which they are commonly known, as in several sorts of the pears and plums, &c.

Peaches are of the capital sorts of wall fruit, and for which a principal part of the best walls should be allotted, and the trees trained accordingly in the wall-tree order, and planted against the best South walls, the principal supply, and some also against South west and easterly walls, to ripen fruit later in succession: seldom trained in standard trees, as the fruit will not ripen on such in this country, in good perfection, though some might be tried in half and dwarf standards, planted in warm situations.

But the trees are trained principally in common dwarf or short-stem'd wall trees, to cover the wall from the bottom upward; and occasionally in half and tall standard wall trees, to plant between the dwarfs, to cover the upper parts of high walls.

All the sorts of peaches bear the fruit upon the young wood of a year old, the blossom-buds rising immediately from the eyes of the shoots: the said shoots seldom bearing after the first year, except occasionally on casual small natural spurs, therefore a successional supply of every year's shoots, produced in Summer, must be retained for bearing the fruit the Summer following: and as the same shoots both produce fruit, and successional supplies of young wood for next year's bearing, that, to promote a plentiful supply of laterals properly situated, those retained for bearing, &c. are commonly shortened in

in the Winter pruning. They also bear sometimes upon small spurs, on the two or three years wood.

Peach trees are propagated by budding the desired sorts principally upon plum stocks, as being hardier and more durable than those of the peach kind; and which plum stocks may be raised from the stones of the fruit, or suckers from the roots, though, as the muscle plum stocks particularly are often preferred, that, to have them with certainty of that kind, they are raised by layers, cuttings, or suckers, as from seed they vary to other sorts; observing, that as the peach trees are cultivated principally in common dwarf wall trees, the budding should be performed near the ground; or for half and tall standard wall trees, to plant between the dwarfs to cover the upper part of high walls, they are budded on tall stocks, at three to four, five or six feet height.

When the trees have produced the first shoots from the budding of one Summer's growth, they may be planted where they are to remain, or when of two, three, to four or five years old, arrived to a bearing state; but observe, that whether the young trees continue in the nursery, or transplanted into the garden, the first shoots should, either in Summer have the tops pinched off early in June, or when a year old, pruned or headed down in March, to four, five, or six eyes, to produce a requisite supply of branches below, to give the head its first proper formation, arranged in a fanned manner; and the second year's shoots also shortened, to promote a further supply of branches; after which prune away fore-right productions, and train the others in a regular expansion, four to five or six inches distance: and when the trees are from two or three, to four or five years old, they will bear fruit.

These trees will prosper in any good garden ground; or if of a rich loamy nature, it will be of greater advantage; or if poor light land, the borders under the walls should be enriched with a compost of rotten dung and fresh substantial good earth, or mellow good sur-

face loam from a common or pasture ground, or where convenient.

Trees for planting may be either of one or two year old heads, or such as are of three, four, or five years, with good spreading heads advanced to a state of bearing; and thereby have the walls furnished at once with bearing trees: and which may be obtained at all the public nursery grounds.

The season for planting these trees is either in Autumn, at the fall of the leaf, end of October, or in November, &c. or in February and March.

Plant the principal supply against the best South walls, fifteen or eighteen feet asunder; others on Easterly and West aspects, to ripen fruit later in succession; and arrange the shoots and branches horizontally, four or five inches asunder, nailing them strait and close to the wall, in very regular order; and in their advancing growth, encrease the number of branches annually, to cover the wall regularly from the bottom upward.

The trees will require pruning every Summer and Winter, to preserve regularity and fruitfulness; a Summer pruning in May and June, &c. to regulate the shoots of the year, cutting out close the fore-right and other ill-placed productions, very luxuriant growths, and obviously superabundant shoots, and to train in all the others in regular order, at their full length all Summer, to remain for Winter pruning; when, observing as these trees bear principally on the young wood of the preceding Summer, a full supply of the best-placed side-growing last Summer's shoots must be selected and retained in all parts of the tree, annually, at this season, to train it four or five inches asunder, cutting out the superfluous or too abundant, and ill-placed, with part of the last year's bearers, and old naked wood, as explained in pruning Apricots; and the retained supply of young shoots shortened about one third the middling shoots, strong ones less in proportion, and the smaller shoots pruned shortest, observing generally in this, not to cut below all the blossom buds, being such as appear
round

round and swelling, the others oblong and thin, and principally shorten to a shoot-bud, appearing long and thin, as just observed, and is proper, in order to form a leader to the main shoots. Then, as soon as pruned, nail the tree regularly to the wall.—See *Apricot pruning*.

In Spring, when these trees are in blossom, that as they generally flower early, when cold weather or sharp, frosty nights prevail, it is proper to shelter the trees of some of the principal sorts, either by nailing up large mats every night when appearances of frost, and occasionally continued in the day-time when very severe, but uncovered when mild; or, in want of mats, have cuttings of some common ever-green shrubs or trees, furnished with leaves, as laurel, laurustinus, yew, &c. and stick them between the branches, so as to shelter the blossom and young fruit, and these to remain constantly till the danger is past. In default of these, use mats occasionally as above, till the fruit is set, and advanced a little in growth; then, in the middle or end of April, remove the covering in general.

Sometimes large old fishing nets are used to hang up before the trees when in blossom and setting their fruit, and permitted to continue constantly till danger from frost is past. They assist greatly in breaking off the cutting effects of the frost.

In the advancing growth of these fruit, in Summer, keep the trees cleared from superfluous and ill-placed shoots of the year, and train the others regularly close to the wall, to admit the free air, and benefit of the sun, rains, &c. to promote the growth, and ripening of the fruit.

The fruit will begin ripening, in the small early sorts, in the end of July and beginning of August; and the principal sorts from the middle of August to the end of September, and large late kinds in October,—being careful to observe to gather the different sorts when at proper maturity of ripeness, and before they become too soft, and the flavour gone. In hot weather, it is best to gather early in the day, before the fruit is much heated by the sun.

Early peaches are obtained by having bearing trees planted in the borders of a forcing-house or peach-stove, or pots of small trees also placed therein; and in which, fires for forcing the trees are commenced making in the flues, to warm the internal air, about the latter end of January, or beginning or middle of February, every evening till about nine or ten o'clock, and in frosty or very cold mornings, and continued thus till May; giving sometimes water to the borders and pots, and, when the trees are in growth, admit air in mid sunny days; sometimes watering over the branches, after the blossom is past, and the fruit set, which will advance freely in growth, and ripen in May and June.

NECTARINES.

NECTARINES are considered as related to the peach family, the trees being exactly similar in growth and bearing; but the fruit of the former hath a smooth firm rind, and the peach woolly; and the nectarine has also a firmer flesh or pulp, and is a very fine fruit, ripening principally from the latter end of August to the end of September or beginning of October: the trees always trained against South walls, as, like the peach, does not ripen fruit in any tolerable perfection on standards nor espaliers: consisting of the following varieties of the fruit, viz.

Fairchild's early Nectarine	Murrey Nectarine
Early Violet	Cleremont
Newington	Elruge
Golden	Peterborough
Red Roman	White.

The nectarines are fine firm-fleshed, rich-flavoured fruit, deserving culture in the different varieties, where there is proper extent of walling, as the trees must always be trained against walls, for the blossom of young fruit advancing early in the Spring, like the peaches, when

when cold weather prevails, will not succeed without the shelter of warm walls, as also to ripen the fruit in good perfection in Autumn; and for which the trees are trained principally in common dwarf wall trees, branching out low, to furnish the wall regularly from the bottom upwards, as observed of the peaches; and occasionally in half tall standard wall trees, to plant between the others, to cover the upper parts of high walls, till the dwarf trees, the continuing residents, advance in proper growth.

The trees bear in the same order as peaches, upon the young shoots of a year old; and as the same shoots seldom bear much after the first year, except on some casual small spurs, a full supply of each year's shoots, produced in Summer, must be retained for successional bearers the year following, and a proportionable part of the former bearers and naked old wood cut out, to make room for the young supply.

They are propagated by budding them upon plum stocks, as mentioned for peaches, and the young trees managed exactly in the same manner, to train them in the requisite order for walls.

For, as nectarine and peach trees are similar in their whole growth, leaves, blossoms, and mode of bearing, not distinguishable one from the other, but in their fruit, which are supposed, by the botanists, to be accidental varieties of one another, and the same method of culture is applicable to both; the nectarines, as observed for the peaches, may be planted where they are to remain, when of one, two, or three years old, or more, or when after being trained in the nursery three or four years, to a proper growth and age for bearing; they will succeed in any good rich garden ground, or, if poor, may be improved with a compost of rotten dung and loamy or other good earth, &c. And the season for planting is either about the end of October, and in November, &c. or in February or March.

Generally allot South walls for the principal supply of these trees, and some on Easterly and South-west walls, planting them fifteen to eighteen feet distance; and the

branches and shoots arranged horizontally, four or five inches apart; and will require pruning every Summer and Winter, in the same manner, in all respects, as observed for peaches,—to which we refer for the particular intimations in that business, both in the Summer and Winter pruning.

In the Spring, when the nectarine trees are in blossom, and the fruit setting, it is adviseable to give some principal kinds, or as many as convenient, occasional protection from frost and cutting weather, as was advised for the peach trees.

The fruit commonly ripens, some the latter end of August, but the principal crop in September, and some late kinds the beginning of October.

A P R I C O T.

APRICOTS are choice stone fruit, which, being nearly of the quality and temperature of peaches and nectarines, are produced principally upon wall-trees in this country; for as the trees blossom early in Spring, and the fruit in its embryo and small young state is tender, and liable to be cut off by frost, which often prevail in its early growth, in March and April, they require the protection of warm walls, both to preserve more certain and effectually a tolerable crop of fruit, and to assist in ripening it with a good flavour.—Consists of the following varieties:

Early Masculine Apricot	Breda Apricot
Royal Orange Apricot	Brussels Apricot
Roman Apricot	Lord Dunmore's Breda
Old Orange Apricot	Transparent Apricot.
Turky Apricot	

These different varieties of apricots are trained principally for wall-trees, and some sorts also occasionally in espaliers and half-standards, particularly the Breda and Brussels apricot; but always the general supply of all the

the sorts are generally trained in the wall-tree order, to obtain good crops of fruit in best perfection.

The apricot-tree, in all its varieties, produces the fruit principally upon the young wood of a year old, and upon small spurs arising on the two and three years wood; but the general supply bear mostly on the young shoots of a year old, which emit the blossom buds immediately from the eyes all along the sides thereof; and of which shoots, in the wall-tree or espalier tree pruning, a general supply of the best placed must be retained every year for successional bearers. And as the same shoots both bear fruit, and a supply of young wood for next year's bearing, it is proper, in Winter pruning only, generally to shorten them moderately, to encourage their producing lateral shoots more effectually, and properly situated, quite from the lower and middle parts upward, otherwise would advance mostly towards the top, and leave the under parts of the mother shoots naked, whereby the lower and middle parts of the trees would be unfurnished with sufficient supplies of bearing wood; but in Summer, selecting a plentiful succession of the moderately strong side shoots, cutting out the fore-right and superabundancy, with singularly luxuriant shoots; and the others should be reserved, and nailed in at their whole length, till the general Winter pruning, as above remarked. But in standard apricots, the heads being permitted to branch out in a natural order, they only need occasional pruning, in order to cut out casual crowded and very irregular growths, and dead wood.

These trees are propagated or raised by inoculating the desirable sorts upon plumb stocks, in July or August, principally low in the stock, at five to six or eight inches, for common dwarf or short-steem'd wall-trees, or for espaliers; and occasionally at three or four to five or six feet, for half and tall standard wall-trees, to be planted between the dwarfs, to cover the upper part of the walls, where required to have the whole furnished as soon as possible to afford a more plentiful production of fruit; or some may be also raised for half and full detached

detached standards, to branch with full heads, such particularly as the Breda, Bruffels, and the Dunmore apricot; and in all of which, as the young trees advance at first with one main bud-shoot, this may either be topped the same Summer, early in June, or, when a year old, should in March be headed down to six or eight inches, to promote a supply of lateral shoots to form the head, and these trained in a fanned spreading manner, in order for the walls. If any are for detached standards, train them with a full head, branching all round.

They are proper for final planting into the garden, against walls, &c. when from one to two or three, to four or five years old, either with the first shoots from the budding entire, when of one Summer's growth, planted in Autumn or Spring following, and headed down as above in March, or remain in the nursery for heading down, and trained two or three years.

Or all the sorts may be had at the nurseries, either young of one or two years old, or that are trained with good spreading heads, of a proper growth and age for bearing.

They may be planted either in Autumn or Spring, any time from the end of October, or beginning of November, if open weather, till February or March.

Allot the principal varieties, some on both South walls, and some may be planted on South-East and West walls, planting them fifteen to eighteen feet asunder; or if any are designed for espaliers, plant them the same distance.

If they are young trees, with the bud-shoots only one year old, they in the Spring, in March, should be headed down to five or six eyes, to obtain lower lateral shoots to form the head, nailing them to the wall at full length all Summer; and in Winter pruning shortened, each shoot about one half or more, to promote a further supply of collaterals, to encrease the head in a larger expansion of branches; and then managed in the ordinary way, hereafter explained.

But

But if trained trees are to be planted of two or three to four or five years old, or more, furnished with a head of several branches, observing at planting, if any fore-right and other ill-placed shoots occur, not well situated for training to the wall, cut them out close; and let the remaining well-placed shoots be shortened about one third of their length, and nailed in horizontally and regular to the wall, four or five inches asunder.

Or some, for standards, may be planted in a warm sheltered situation; and in which they, in favourable seasons, often bear plentiful crops, and ripen in good perfection.

The general culture of the wall apricot-trees consists of a Summer and Winter pruning, and in both of which a general supply of the young shoots of each year must be retained for principal bearers, as those trees bear chiefly on the young wood of a year old, as formerly observed.

The Summer pruning may be commenced in May or June, and consists of only a regulation among the young shoots of the year, in which prune out all the fore-right productions, others that are ill placed, and very luxuriant growths: and if the proper shoots are too abundant, cut out the superfluous, leaving plenty however of all the well-placed side shoots, and a good leading shoot to each mother branch; and let the whole of the retained shoots be continued at their full-length, and trained in close and regular to the wall all Summer, to chuse from in Winter pruning for next year's bearers. Observing in May and beginning of June, as sometimes apricot fruit are abundantly too numerous, often growing in clusters, they should be thinned in their young growth, leaving the most promising singly, three or four inches distance, or more, on their respective shoots. Those thinned off, are excellent for tarts.

The Winter pruning may be performed any time from the fall of the leaves, in the end of October or beginning of November, till March; consisting of a regulation both among the young wood of last Summer's

mer's training, and the older branches; observing of the younger shoots, a general supply must be everywhere retained of the most regular placed, of middling strong growth, at moderate distances, to train in for successional bearers next year, or for new wood occasionally to encrease the expansion of branches where necessary, pruning out close the superfluous or overabundant, with all fore-right and other ill-placed shoots and very luxuriant productions; and of the old wood, cut out some of the former bearers, and naked old branches not furnished with proper young wood, or bearing shoots, or fruit spurs, cutting them down either some to their origin, or to some lateral young shoots, &c. to remain for a leader, as may seem most expedient to make room for training the successional bearing wood now retained, cutting out all decayed wood and old stumps, generally leaving one good terminal leading shoot to each branch, either naturally placed at the termination thereof, or sometimes the branches pruned down to a good shoot for a leader, as above remarked; and let the remaining general shoots, according as retained, be moderately shortened, being careful in this not to cut below where the blossom buds appear, or are expected to advance: and as, often in these trees, small natural spurs of an inch or two long, furnished with blossom buds, appear on the two or three years branches, they should also generally be continued for bearing. And as soon as pruned, let all the branches and shoots be nailed to the wall horizontally, in a regular manner, four to five or six inches distance.

If any trees are trained in espaliers, they should have the same management as directed for the wall-trees, both in Summer and Winter pruning.

And in standards, they only require pruning occasionally, to cut out any very disorderly branches, or to thin others where confusedly crowded, and to prune out casual dead wood: all which, when necessary in standards, generally perform in Winter.

Apricot

Apricot fruit is valuable both in its young green state, in May and June, to gather in a thinning order, where thick, with which to make tarts; and when ripe, in July and August, is a very estimable table fruit, which should be gathered before too soft and meally ripe, it being in greatest perfection when moderately firm, and of a poignant flavor.

As apricots blossom early in the Spring, when sharp frosts often happen, it is adviseable to shelter some wall-trees of the principal varieties, as directed for peaches.

Early apricots, to gather in May and June, &c. are obtained by planting trained bearing trees in forcing stoves, or against hot walls, as observed of peaches, cherries, &c.

F I G.

FIGS are delicious fruit, of a tender nature, that the trees require to be trained principally as wall-trees, against the best South walls, and produce the fruit always upon the young wood, the last year's shoots, immediately from the eyes thereof; coming out in small round buds, without any appearance of blossom, which is contained within the bud or cover, wholly concealed; and the said cover being the general calix or receptacle, becomes the fruit, encreasing in size all Summer, and ripens in Autumn, about August and September, consisting of the following varieties, viz.

Early small white Fig
Large white
Large blue or purple
Black Provence
Brown Ischia
Green Ischia

Green Naples
Genoa
Yellow Caesar
Malta
Milward
Brunswic, or Madonna

The

The figs are desirable autumnal fruit, ripening soft and rich-flavoured, very deserving of culture in all gardens where there is proper scope of South walls, &c. as they will not ripen without that assistance in this country: and the trees also producing large succulent tender shoots, which, without the shelter of warm walls, are often killed by the frost in severe winters, therefore the principal supply should be in wall-trees, chiefly against South walls. A few may also be trained in espaliers, in a warm situation full to the sun; some also in dwarf or low standards, to plant in a warm exposure.

As fig trees bear on the young shoots of a year old only, a full supply of each year's shoots must be preserved every Summer and Winter pruning, to train in for successional bearers the year ensuing, and observe, that as the said bearers produce the fruit mostly towards the upper and extreme parts, they must not be shortened.

These trees may be obtained for planting in their different varieties, at all the nursery grounds, both in young plants of one, two, or three years old, or of more advanced growth; and may be planted either at the fall of the leaf, in October or November, or in February or March, disposing them against southerly walls, as before observed, fifteen to eighteen feet distance, and the branches arranged horizontally, five or six inches asunder, all at their full length.

They are propagated and raised by suckers from the roots, and by layers and cuttings of the young branches and shoots. The suckers may be digged up in February or March, with roots to each, and planted, some strong ones at once where they are to remain, or the whole may be planted in a nursery for a year or two, to gain strength, and the head furnished with several branches, for final transplanting.—The propagation by layers, must be of the young branches not exceeding a year or two old, or the young shoots of a year, laying them as they remain on the tree, in Autumn, or February or March, the stem of the branch or shoots laid in the earth.

earth three or four inches deep, and pegged down, with the tops several inches above ground: they will be well rooted by Autumn, when, or in Spring, separate or cut them from the mother tree, and plant them either where they are to continue, or in a nursery for a year or two.—And by cuttings, perform it in the Spring: cut off some young firm shoots a foot long, and plant them in a shady border, they will be rooted by Autumn, then may be treated as mentioned for the layer plants.

Fig-trees will thrive in any good garden earth, as mentioned for fruit-trees in general. Allot the principal supply some best South walls, to have plenty of sun for ripening the fruit, planting them fifteen to eighteen feet asunder.

The trees, when planted either from the nurseries, or of your own raising, should have the branches trained to the wall in regular order, nailing them along horizontally at their whole length, five or six inches asunder: and as they will produce many shoots every Summer, these, in July and August, must be regulated, by pruning out the superabundant and irregular placed; but observing, as they bear on the young wood only, to leave a plentiful supply of as many of the best-placed side-shoots as can be conveniently trained in, nailing them close to the wall, without shortening, to remain to chuse from in the general Winter pruning; continuing the whole closely trained during their growth in Summer, to admit the benefit of the sun to ripen the fruit effectually: and in Winter pruning, it is advisable, as the frost often kills many of the shoots, to leave the whole unpruned till February. Having then the choice of all that remains, select a proper supply of the well-placed moderately strong shoots in all parts of the tree, for next Summer's bearing, and cut out the superabundant, with part of the naked old wood, retaining the young supply at their whole length, only cutting off casual dead parts; and then nail the general shoots and branches regularly to the wall, five or six inches distance.

Figs

Figs begin to ripen in August, and are in full perfection in September, at which times be careful to clear the trees from unnecessary or useless shoots of the year, and train the rest close, to give full access to the sun, to ripen the fruit with a rich flavour, which, when soft and buttery-like, is in perfection.

If any fig-trees are trained in espaliers, they require the same culture as wall-trees; and if any dwarf standards are planted in some warm sunny situations, have them branch out with full heads, pruning out only irregular growths, or thin crowded branches and shoots, and cut out dead wood.

In rigorous Winters, as the shoots are succulent, tender, and many of them liable to be killed, it would be of advantage, in severe frosts, to protect some of the best trees with mats nailed close, to remain during the continuance of the inclement weather.

As in fig-trees a second production of many young autumnal green fruit arise on the same year's wood, too late to ripen, and remaining green on the shoots after the leaves fall, they should generally be pulled off in November, as they never acquire maturity in this country.

G R A P E S.

GRAPES are most desirable fruit of the berry kind, juicy, and most richly flavoured, when properly ripened. The trees, or vines, on which they are produced, are trained principally against South or southerly walls, as they seldom ripen fruit in tolerable perfection, in England, without that assistance, or sometimes in espaliers; bearing the fruit always upon the young wood only, that is, the shoots of last year, produce many young shoots in the Spring, and upon these same shoots of the year the fruit is produced, arising in small clusters of blossom in the bosom of the young leaves, becoming large bunches of berries, increase in size till August, or September and October, then

then ripen ; or sometimes by forcing in vinery-stoves, hot-houses, &c. are obtained in May and June. Comprise the following varieties :

July Grape
White Sweet Water
Black Sweet Water
White Muscadine
Black Muscadine
Royal Muscadine
Black Cluster
Chasselas
Black Frontignac
White Frontignac

Grizly Frontignac
Corinth Grape (*small berries*)
Lombardy Grape
Damson Grape
Claret Grape
Raisin Grape
Syrian Grape
Alexander Grape
Tokay.

In the above collection of grapes, most of the principal sorts attain perfection, when well trained against South walls, and some sorts by training in the vineyard order, to stakes or trellis work ; ripening against walls, some early kinds in August, but the principal supply generally in September, and late kinds in October ; and some of the large sorts require the aid of artificial heat in glasseries, in vineries and hot-houses, &c. such as the Syrian, Alexandrian, Raisin and Tokay grapes. Several of the other sorts of grapes, that ripen in the open air, are ripened early by forcing in stoves, vineries, and other fruit forcing houses, attaining perfection in May, June, and July.

Grapes are very desirable fruit to cultivate in every garden, where there is the accommodation of South walls on which to train the vines ; for these fruit will not attain any tolerable perfection in this country without that aid ; and sometimes in unfavourable seasons, and cold wet Autumns, they, even with the assistance of the best walls, ripen but indifferently, and some not at all with any tolerable flavour : and, as they require all possible benefit of the sun to forward their ripening, great attention is necessary, in order to train the vines in great regularity every Summer, by timeously clearing
away

away all useless and superfluous shoots of the year, and the others kept trained close to the wall, to admit all possible advantage of the sun; otherwise the grapes will not ripen effectually.

Vines, in their mode of bearing, always produce the grapes on the young shoots of the same year, arising from those of the year before. Never any immediate bearers come directly from the old wood, so that, as the year old shoots only are the immediate parent bearers of each Summer, *i. e.* those of last Summer producing many young shoots the year following, and these new shoots produced immediately from the last year's wood, and no other, furnish the grapes the same year, appearing generally in April and May, &c. arising immediately from the eyes of the said young shoots, in small clusters of minute blossom buds, containing the fruit in embryo, as before observed, advancing first inclosed in the bosom of the young leaves, encreasing in size, flowering and setting the fruit in May and June; in oblong bunches of numerous berries, white, black, red, &c. in different varieties, improving in growth all Summer, till August, September, &c. then ripen in succession, some early sorts the beginning or middle of August, others the latter end, and the principal supply attain maturity mostly in September, and some late sorts not before October.

Though it may be proper to remark, that some particular varieties of grapes will not ripen freely in this country, or some not at all, unless they have been assisted either by artificial heat in some glassiary, or at least have the constant shelter and protection of some glass-house in the full sun, to forward the fruit in its early state, that it may advance to a proper growth timeously in Autumn, as also at that season to have the shelter of the glasses from wet and cold, and that the aid of the glassiary may encrease the warmth or heat of the sun internally, to promote the ripening of the grapes more effectually.

Or by the aid of having vines in forcing-houses, as vineries, peacheries, &c. of any desirable early, middling,

dling, and late sorts, assisted by artificial heat of fire or bark-beds, or both, the grapes are thereby ripened two or three months before their natural season, and always in the highest perfection, in May, June, &c. that would not attain maturity in the open ground, before August, September, and October, as before observed.

However, most of the principal desirable varieties of grapes ripen in good perfection in the full ground and open air, against South walls, &c. or those nearly of a southerly aspect; they also sometimes ripen tolerably well in espaliers, in a warm situation in the full sun, or likewise when trained in the vineyard order to stakes, hereafter mentioned: and, in all of which, the branches and shoots trained in regular to the wall, and espaliers, &c. fix or eight to ten or twelve inches asunder, in the general Winter pruning; and in Summer, the shoots of the year regulated, by displacing the useless and unnecessary, and to train in the fruitful shoots, and others, both in the young and old wood, that are well-placed, close and regular to the wall, &c. all that season, to admit the full benefit of the sun to forward the grapes to a proper growth by Autumn, and to ripen them then in good maturity and full flavor.

Proper plants of vines for planting may be obtained at the nurseries, either young, of two or three years growth, or such as are advanced to a proper age for immediate bearing; and all the sorts may be easily raised by layers and cuttings, as hereafter explained.

They may be planted either in Autumn, as soon as the leaves fall or decay, or in the Spring, about February and beginning or middle of March; always allotting them a dry situation, as full to the sun as possible, otherwise they will not ripen grapes in good perfection.

Vines are propagated both by layers of the young shoots and branches, of one or two years old, or more, and by cuttings of the young shoots of the preceding Summer; and each of which are performed in Autumn or Spring, &c. as intimated below.

By

By layers,—it may be performed either in the Autumn, about November, December, or any time in open weather, till February or March, when chusing either some lower pliant young branches, one or two years old, or more as may be convenient, and that are furnished above with some strong young shoots; or may be wholly of the young shoots of last Summer: and either of which, as may be convenient, proceed to lay as they remain attached to the mother plant, bowing them down to the ground, making an opening longways, laying therein the stem of the shoot or branch, three or four inches deep, with the top shoots one or two feet or more above ground, pegging down each layer with a hooked stick, pruning the top parts to two, three, or four joints, or more, according to the strength of the shoots; and if against a wall, or stakes, &c. train the above-ground shoots thereto. The layers will strike in the ground, and be properly rooted, as well as have produced strong top shoots, by next Autumn, when, or in Spring, they may be cut from the stools, and planted where they are to remain.

Or sometimes, in laying, may occasionally perform it in large pots, either by drawing a young shoot or branch through the hole at bottom, or bending the layer down into the pot at top; and so, in either method, fill the pot with earth, and plunge each into the ground. They will thus root: then cut them from the stool, and the pot may be removed, with the growing layer, the first or second year, or as required, and planted where intended, with the whole ball of earth in the pot entire, breaking the pot carefully to preserve the ball, and the plant will thus less feel any check by removal, so as they will sometimes bear fruit the ensuing season:—or some may be occasionally retained in pots, to fruit therein, and moved to any particular place required by way of variety.

By cuttings, is performed either in Autumn, or principally in the Spring, about February, March, or beginning of April, of the young shoots of last Summer; which,

which, however, for Spring planting, may cut off for that purpose in any of the Winter months, and preserved by laying the cuttings by the lower ends in a border of dry earth, and covered from frost; and in collecting the cuttings may sometimes take part of the old wood to the lower end, an inch or two long, or without any, as they may occur, chusing the strong well-ripened shoots cut to three joints; and plant some either in a nursery, in a shady border, or some at once where they are to remain, inserting them two joints into the ground, and one joint or eye above. They will emit roots below, and moderate shoots above, in Summer, forming good young plants by next Autumn, when, or in Spring, or when they have had another year's growth, those in the nursery may be transplanted where they are to continue, and those planted at once where they are to remain may stand, or, if too many, remove the weakest, retaining a sufficiency of the strongest plants.

Then, as to the planting of vines finally, either those obtained from the public nurseries, or home raised, as directed above, it should be performed generally in young plants from one or two to three or four years old, or such as are advanced to a proper age and size for immediate bearing; and may be planted at the usual planting season, in Autumn or Spring, any time in open weather, from November till February or March.

Vines will succeed in any common garden earth; but it is adviseable to allot them a dryish warm soil, or with a dry bottom particularly, if possible, which is of much importance, as it is of great advantage to the fruit, in ripening the grapes sooner, and with a rich flavor; and therefore, if the situation is naturally of a wetish or strong cold temperature below, it will be beneficial to apply some dry materials at bottom, in a compost of stony or lime rubbish, road scrapings, &c. and dry earth.

For wall vines, always plant a principal supply against some best South walls, or paleings, &c. either some in
a con-

a continued range planted ten or twelve feet asunder: or others may be planted in vacant spaces between peaches, nectarines, &c. or some against buildings of houses or other erections in the full sun. When planted, prune the shoots, selecting the strongest well-placed to remain, to train six, eight, or ten inches asunder, cutting out the others; and those retained cut to three, four, five or six joints, and nail them to the wall, either horizontally, or more or less in an upright direction, as the scope of walling admits.

To train in the espalier order to stakes or rails, may also plant several of the forward ripening sorts of grape vines in a dry warm situation exposed to the full sun: prune and train them as advised above for the wall vines.

Likewise vines may also be planted in the vineyard manner, being continued ranges planted ten or twelve feet asunder, in a sunny dry warm situation, or on the side of a moderate acclivity enjoying the full sun; and to each row of vines is placed a range of stakes three or four feet high, and the branches and shoots of the vines trained thereto horizontally, six to eight or ten feet distance; and which order of planting is designed principally to produce large supplies of grapes, with which to make wine, &c.

The above being the different orders of planting vines, next follow the general intimations for pruning.

PRUNING vines is a work of particular attention, consisting of an annual Summer and Winter pruning:—a Summer pruning, at different times in that season, to regulate the abundant shoots of the year; and a general Winter pruning both in the young wood and older branches.

The Summer pruning of vines is necessary every year, commencing in the end of April, or in May, and continued in June and July, &c. consisting of a regulation in the numerous young shoots of the same year,
in

in displacing the improper, and training in the useful; and in which observing, as these present shoots both produce the fruit the same season, especially those arising immediately from the last year's wood, no others, and the said shoots, and others of eligible growth, become the parent bearers to produce the fruit shoots the year following, a proper supply of the best must now be retained, both of all those that are furnished with young fruit, and others as are strong and well-placed, and from which to clear out all the improper and unnecessary shoots.

This regulation may be commenced the middle or end of April, or in May aforesaid, when the vines will be advancing in numerous shoots, and is of great advantage to begin them early, and displace the evidently useless shoots, by rubbing them off close to their origin; and when more advanced, in May and June, &c. give them a more general regulation, taking off all the most useless unfruitful productions and other improper shoots, especially most of those which arise immediately from the old wood, except strong ones below, and in all parts where wanted to supply vacancies for future bearers, as these are never finished with present fruit, though proper to train in occasionally for next year's bearing; and likewise prune out weak straggling shoots, and others produced where improperly placed for training, as also to thin others where considerably superfluous or too abundant, or remarkably crowded; but observe, of the well-placed shoots, and those in fruit, leave an abundant supply, and always retain a sufficiency in vacancies, and carefully furnish the bottom parts properly with some strong young shoots advancing between the main branches. The whole that are now retained preserve mostly at their full length for the present; and according as they proceed, or at least when the reserved shoots are advanced about a foot long, or little more, to admit of laying in, let them be nailed in regularly to the wall, &c. generally running or extending the shoots mostly in length during their principal growth, or till July, &c.

The fruit-shoots, furnished with present fruit in advancing growth, may, when advanced of some tolerable length, be shortened or topped two or three joints above the uppermost branches, to retain the principal supply of nourishment to promote the growth of the fruit more effectually on the respective shoots.

After the above early and general Summer regulations of the vines, in April, May, June, &c. they, in their particular manner, will advance in a further growth, both in many advancing new shoots, and those before retained, encreasing considerably in length, and should be well attended accordingly, in order to displace the improper after-productions before described, and to nail in the advanced fruitful and other proper shoots close to the wall in the most regular manner, to admit all possible benefit of the sun, both to promote the free growth and ripening of the fruit, as well as to ripen the proper shoots in a mature degree for next year's bearers; and observing, as many small shoots are emitted from the eyes of the principal ones, they should be detached, rubbed off close in their young growth, leaving the principal shoots clear of incumbrance, and these always trained along close to the wall; and thus the grapes will acquire good perfection timeously in their proper season.

When the general extreme shoots have advanced considerably in length, or over-top the wall, or extended beyond their allotted bounds, they may be more or less shortened, as required.

The vines trained in espaliers, or in vine-yards, to stakes, should also have a Summer regulation as above, of pruning out the useless, and training in the fruitful and other proper shoots of the year in regular order.

In the early Summer dressing, in April and May, &c. while the shoots are young, the displacing the improper shoots may be performed without a knife, by rubbing or breaking them off close with the finger and thumb; but when they are more advanced, grown more hard and woody, the knife must be used, especially in detaching the large shoots.

In

In the Summer regulation of vines, it is of particular importance to begin early, about April or May, as before observed, to rub off the evidently improper shoots of the year, before they advance considerably, and entangle with one another; and will be of great advantage in forwarding the growth of the present fruit, which otherwise, in this country, will not ripen in any tolerable perfection: and for the same reason should continue the after regulation, in displacing all improper productions, and to keep the fruitful and other useful shoots always nailed in close, to admit the proper influence of the sun, air, dews, &c. to promote the full growth of the grapes in large regular bunches, with large berries in proportion, and that they may ripen in all possible perfection timeously in Autumn, before retarded by the wet and cold in the latter part of that season, and in which they require all possible benefit of the full sun, to ripen them freely with that richness of flavour peculiar to most of the varieties of grapes.

Observe in the advancing growth of the grapes, if any bunches are entangled in the branches, or with one another, let them be disengaged, that each bunch may hang freely in its proper position, to enjoy an equal benefit of the sun and air, &c.

The grapes ripen principally in August, September and October, in the different early and late sorts; and all of which should be permitted to attain good maturity before they are gathered, otherwise they will be very inferior for eating, &c. as well as unwholesome.

The Winter pruning of vines is performed in November, December, &c. till February or March, and consists of a general regulation annually at the above season, both in the young wood and older branches, in which observe, as before intimated, that vines bearing only on the young wood, the shoots of last Summer being proper to retain now in successional supplies for producing the fruit-shoots the ensuing year; and from which to prune out the superabundant and useless shoots, with part of the most unserviceable old wood.

to make eligible room for the requisite supply of successful bearers.

This operation may be performed any time from the fall or decay of the leaves, in November, &c. till February or March; though it is most adviseable to have the whole finished before too late in the Spring; and if performed in November or December, will generally prove of greater advantage in the ensuing year's bearing.

In this general pruning, be careful to make a proper selection of the strongest best-placed shoots of the last Summer, in all parts of the vine, both in the old and young wood, to retain for next year's bearers, trained at six to eight or ten inches distance; and, to make proper room, prune out the superabundant and ill-placed, with part of most of the last year's mother bearers, and casual too long extended naked old branches cut down less or more, either some to their origin, others to some lateral young shoot, or any commodious branch furnished therewith, so as each principal branch terminates in a young shoot; giving particular attention always to leave the proper shoots in some regular order, advancing as it were progressively from the bottom to the top or extremity of the vine, to have all parts well furnished with bearing wood; and all of which reserved shoots must be shortened, pruning the smaller ones to three or four joints, strong ones to five or six; or occasionally, where there is any extensive vacant space of walling, some particular shoots may be left longer in proportion. And in all of which perform the shortening generally about half an inch to an inch above, and behind an eye or bud, in a clean cut a little sloping.

As soon as they are pruned, nail them to the wall, both the old and young branches, in the most regular order, either horizontally or more or less upright, as the scope or allotted space of walling, &c. admits, all at equal distances, about six to eight or ten inches asunder; or, where the shoots have been left too abundant in pruning, cut out the most irregular now, to admit of nailing the whole in regular order, as above.

Any

Any vines trained in espaliers, or to stakes in the vineyard order, as before observed in the Summer regulation, should also have a general Winter pruning, as directed above for those against walls; in which generally keep the long advanced naked branches cut down more or less, as it may seem expedient, cutting them occasionally to some lower branches or shoots, and keep the shoots in general moderately thin, and shortened to three or four to five or six joints, and then tied in regularly to the trellis or stakes, six to eight or ten inches distance, or more.

In vines, where there are any naked below, or destitute in the lower parts of proper bearing wood, or that you are desirous to extend them further along any vacant part of the wall, &c. some of the lower young branches or strong shoots, of some considerable length, may, in Autumn, Winter, or Spring, be laid down into the earth, with the top a foot or two, or more, above ground, as directed in the propagation thereof by layers. They will strike root below, and shoot above, to furnish the vacancies required; and thus may always keep the vines well furnished with proper wood quite from the bottom, or extended side-ways.

To have the grapes ripened in good perfection, observe always, during the Summer's growth of the vines, in general to keep them well cleared from all useless shoots of the year, before described; and train the fruitful and other proper shoots close to the wall, &c. to admit the full power of the sun. They will thus ripen, in August, September, and October, in the different varieties, as before remarked; and should be gathered accordingly, or as wanted, permitting them generally to acquire full maturity. They can never be too ripe in this country.

When the grapes are ripe, they being often attacked by birds, wasps, flies, &c. it is advisable to protect them, either with nets, to keep off the birds, or, to guard them both from the latter and insects, the finest bunches may be bagged, each bunch separately, in a paper gauze,

or crape bag, which will effectually preserve them from the above depredations.

In the late ripening grapes, in the end of October, any then remaining may be gathered, cutting off part of the shoot therewith, on which they grow, and hung up in some dry warm apartment, they will continue in tolerable perfection two or three weeks or a month, or more, if required.

To obtain early grapes in May, June, &c. or also to ripen large late sorts that do not attain good maturity in the open ground in this country, they are planted in the borders of forcing-houses or hot-walls, or without-side in a border close to the front, and the stem of each introduced through a small aperture above, and the shoots and branches trained up under the glasses, and are there forwarded by means of artificial heat of fire or bark-beds, or both, commenced the end of January or beginning or middle of February, making fires every evening and cold morning, &c. till the end of April or beginning of May; or if bark beds, either in conjunction with fires, or separately, they are continued constantly during the forcing season, as above; in which air must be admitted moderately in sun-shining days, and to those planted within give light waterings to the borders. They will thus ripen grapes in May, June, July, &c.

Likewise in a pine-apple stove or hot-house grapes are ripened very early in the fullest maturity, as also such as will not ripen in good perfection in the open air, in England, &c. are, by that assistance forwarded in eligible growth to full size and effectual ripeness and richness of flavour, the vine-plants of the desirable sorts being planted in a border close to the outside of the front wall, each trained first with a single strong shoot for a stem; then, in Autumn or Winter, is admitted through a hole above into the hot-house, there conducted up the inside under the glasses, and along the ends, to thin cross battens or slips of wood; and having the ordinary general culture of the stove or pinery, in regard to internal heat, air, &c. they will produce early
fruit

fruit shoots and others, managing them as directed for the natural ground vines, and they will also ripen grapes in May, June, and July.

Or where there is any glasshary, or glass-case, in which green-house plants are wintered, if furnished with sloping top-glasses, may have any desirable sorts of vines planted on the outside of the front, and the stems and branches trained in under the top glasses, as aforementioned. They will afford ripe grapes sooner, by a month or more, than those in the open air, and ripen in good perfection.

For the above purposes of forcing, any principal sorts most approved of may be planted, or some of the following, viz. Frontignac, Muscadine, Hamburgh, Raisin Grape, Muscat of Alexandria, Tokay, Muscat of Jerusalem; St. Peter's and Syrian, both remarkably large; Frankindal; Gibraltar, very large.

A L M O N D S.

ALMONDS are stone fruit of the peach family, consisting of an oblong-oval fleshy outer cover with a woolly rind, containing a stone or nut furnished with a tender kernel, which is the only eatable part, ripe in September. The trees are not much cultivated, as the fruit, especially the sweet-kernelled kinds, do not always ripen in this country in any tolerable plenty and perfection; though, where there is good scope of garden-room, a few trees merit admittance, in wall-trees, espaliers, or standards. Comprise the following varieties:

Bitter Almond
Sweet Almond

| Tender-shelled Almond
Hard-shelled Almond.

Of these varieties, the sweet and tender-shelled sorts are the most desirable for culture, some in wall-trees against South walls; and may also have some of each in standards.

They all bear on the young wood, as peaches, nectarines, &c. and upon small spurs on the two, three, or several years branches.

The trees of the improved varieties, as the sweet almond, &c. are raised principally by budding them either upon seedling stocks of the bitter almond, or upon those of plums. Any of the other varieties may also be raised in the same manner, in which to have them bear sooner than if raised wholly from the stones. And the trees designed for walls are trained and managed as directed for peaches, nectarines, and apricots; and when they are of two or three to four or five years old, may be planted where they are to remain.

Allot a few trees against a South wall, planted in Autumn or Spring, fifteen or eighteen feet distance; prune and train them as directed for peaches and nectarines, preserving young shoots of each Summer for bearing the succeeding year, also the small natural spurs on the older wood, giving them a Summer and Winter pruning, as for the peaches, &c. just above mentioned.

Or also in espaliers, a few trees may be admitted for variety, and pruned and trained as mentioned above for the wall-trees.

For standards likewise, a few trees may be raised and trained in that order, of the different varieties, both in half and full standards, and planted in some warm situation fully exposed to the sun, permitted to branch out above in regular heads; and in which will require only occasional pruning, to reform casual very irregular growths, cross-placed and very crowded branches, or to reduce singularly long ramblers, and to cut out decayed wood, as in other standards.

The almond trees blossom early in the Spring, when cutting frosts sometimes occur, and being of a tender nature, like the peaches, &c. the fruit in embryo, or of young growth, are frequently cut off by the weather in unfavourable seasons, but when favourable, is sometimes produced in tolerable plenty.

The

The fruit sets in March and April, continues in growth till September or October, then, when fully ripe, the outer coat opens less or more, naturally to give out the stone containing the kernel; - and which may be gathered for present use, and for keeping.

M E D L A R S.

MEDLARS are fruit of no considerable value, and are not eatable till after they are gathered, and lain some time in the house to become of a buttery softness, rotten as it were, they attaining full growth on the trees in October, are hard and austere, until mellowed as above. The trees, which are moderate growers, are raised principally in standards, and some occasionally in espaliers; only a few trees in each or either method. Consists of only two varieties of the fruit, *viz.*

Large Dutch Medlar | Nottingham Medlar

Of these two sorts, the first is the largest, the other not so large, but is more esteemed, as the best flavoured. The trees of both are very hardy, to grow in any common soil and situation. A few of each, or both, as may be required, are proper to admit in the fruit-tree collection in gardens and orchards, either principally in standards, or some also in espaliers, for greater variety, and to have the fruit of improved size and flavour: planted, the standard trees twenty or thirty feet asunder, and the espaliers fifteen or eighteen feet distance; and in both of which, managed as for apples and pears.

The trees bear the fruit mostly upon small natural spurs, in the manner of apples and pears; and therefore a similar mode of culture, in pruning, training, &c. is applicable to the medlars.

They are propagated and raised by grafting or budding the approved sorts upon medlars or pear stocks, for half or full standards and espaliers, in the manner advised for pears and apples, as above-mentioned, training the young trees in the same method; and when they are furnished with a head of branches, two or three to four or five years old, are of a proper age for planting them where they are to remain, and will soon commence bearing.

The trees, in either of the above methods of training, may be planted in any common soil of a garden or orchard; and the planting may be performed in the common season, any time from the decay of the leaves in Autumn, till March, in open weather, at the distances before mentioned.

The fruit continues in growth till October. When it attains full maturity, should be gathered and housed, and in which, as they are hard and austere when first gathered, require to lie some time to become soft for eating; and to forward them to that state, it is proper to lay some in moist bran every week or fortnight, wherein they will sooner acquire a proper mellowness for eating.

Q U I N C E.

QUINCES are large yellow fruit, resembling pears and apples, and of a remarkably high fragrance; esteemed principally for making marmalade, and to slice into apple-pies, &c. to heighten the relish and flavour, being too hard, sour and austere, to eat raw: and for which occasions a few trees merit culture, are of moderate growth, and are commonly raised in small standards, and occasionally in espaliers. Produce the fruit chiefly on small natural spurs, emitted from the sides and ends of the branches: grows to a large size, pear and apple shaped, ripening in September and October, of a golden yellow colour, consisting of the following varieties:

Pear-

Pear-shaped Quince
Apple-shaped ditto

| Portugal Quince
| Eatable Quince

Any, or some of each of these varieties may be cultivated. The trees of all the sorts are hardy, to grow freely in any common soil of a garden or orchard; &c. They delight in moist places, near the sides of water, and are therefore often planted by the sides of ponds and watery ditches; but will also grow in almost any situation, are mostly of moderate growth, as before remarked, and are raised principally in standards, the general supply, and of which a few trees may be sufficient for a family; and may also have some occasionally in espaliers, for variety: planting the standards twenty or thirty feet distance, and the espaliers fifteen to eighteen feet asunder.

These trees are of the family of *Pyrus*, or Pear, and their nature of bearing is similar to that of pears and apples, producing the blossom and fruit principally upon small natural spurs, arising at the sides and ends of the several years old branches; and in their culture the same method of pruning and training is to be observed.

They are propagated by grafting and budding the sorts required upon seedling or sucker stocks of quinces or pears; and are also raised by layers, cuttings and suckers, all of which in the manner explained in raising other fruit-trees by these different methods; and in which, those designed for standards, train each with a single stem, four to five or six feet high, and at these heights permit them to branch out above to form full heads, as described in the culture of apples, &c. And if any are intended for espaliers, they should be grafted or budded near the ground; or if raised by layers, cuttings, &c. for the same occasion, should be headed low in proportion, to obtain branches below, to furnish the espalier regularly from the bottom upwards; though, for general use, a few trees in standards may be sufficient.

Or

Or the trees may be had at the nurseries, ready raised, of two, three, or several years growth, of a proper age and size for bearing.

They may be planted any time, in open weather, from October or November till March, and at the distances before mentioned.

In the culture of the trees, the standards require hardly any, after having formed proper heads, only to prune any casual ill-growing branches, as directed for other standard fruit trees; and permit the other general branches to advance in their full growth, as explained for apples and pears.

And if any are planted in espaliers, prune out the fore-right and other ill-placed shoots and branches, and train the others generally at their full length, five or six inches asunder; and, like other espalier trees, will require a Summer and Winter pruning; and in which, as their mode of bearing is similar to that of apples and pears, as before observed, manage them in the same manner as directed for those species.

The quinces ripen in September and October, when they may be gathered for present use; and in October gather the whole, and house for keeping.

M U L B E R R Y.

THE Mulberries are desirable Autumn fruit, of a most juicy refreshing quality; very deserving of culture; the trees trained principally in standards, on which they bear abundantly, especially on trees of some advanced growth, they bearing mostly on the young wood of the former year, or on small spurs of young growth, and at the termination of the former, and beginning of the same year's shoots, producing male and female flowers separate, the former in loose amentums, and the latter in round close granulate receptacles, growing to large oblong-oval berries, ripening in August and September. Consisting of the following varieties:

Black

Black Mulberry
White Mulberry

Red Mulberry

But of these varieties the Black is that commonly cultivated.

Of the above different varieties of mulberries, the black is the principal sort to cultivate for the superior goodness of the fruit, and the trees the best bearers; or; for variety, some of the white and red may be admitted in the fruit-tree collection. Are all trained principally in standards, in any situation where they may enjoy the full sun, to ripen the fruit in proper time in Autumn, with a good flavour; or some of the black may also be trained and planted for wall-trees, and in espaliers, to obtain larger and earlier fruit.

But as mulberries are only principally for present use, for about a month or six weeks, only a few trees are commonly planted; such as in small gardens sometimes but one or two, or in larger grounds double or treble that number, or more, especially as the trees are slow growers, and many years before they attain a large growth in full heads to bear any considerable quantity of fruit; and by having several trees, they together, in their younger growth, may afford eligible supplies of berries, but when advanced to some considerable age, with large spreading heads, they produce vast quantities of fruit, as often one tree furnishes more than sufficient for the supply of a large family: so, according to those intimations, the trees may be raised and planted in a smaller or larger supply, as shall be thought necessary.

The trees are raised in all the public nursery grounds for sale, and where they may be obtained of some considerably advanced growth, with a good head of branches to commence immediate bearers in small quantities of fruit.

They are propagated or raised by cuttings, layers, and grafting, as explained for other trees raised by these different methods; in which train the principal supply
for

for standards, each with a single stem five or six feet high, then permitted to branch out above, to form a full head : to advance nearly in their natural order, only to prune any irregular growth, as may be required, to give the head a somewhat regular shape ; likewise may train some with short stems, to branch out low for wall-trees and espaliers.

The trees raised as above, to a proper growth, with a tolerable head of young branches, may be planted where required in Autumn or Spring, any time from October till March or April.

The standards may be planted in any free situation in the kitchen or pleasure garden, twenty to thirty or forty feet distance ; and are frequently planted on some grass-plat or lawn, &c. or otherwise, when the trees arrive to bearing, the ground under them is sometimes laid with grass to some considerable width, in order that as the berries, when full ripe, are apt to drop off considerably, by wind, rain, and by moving the branches in gathering, and falling on the clean soft sward, they may be occasionally gathered up, if required, in good condition for eating.

A tree or two, or more, as required, being raised in wall-tree order, may be planted against a South wall, the branches trained thereto horizontally, five or six inches asunder. They will produce fruit earlier, and in some improved size and flavour ; and which will require pruning annually, in Summer and Winter, nearly as directed for peaches and apricots, preserving young wood off every year for principal bearing, but not generally shortened, as they bear towards the extreme parts of the young wood.

Likewise may plant some in espaliers, and managed as those trained in wall-trees, as above.

The fruit ripens in good perfection in August, and part of September, and should be gathered as wanted, in small baskets, to contain but small quantities, that they may not bruise one another in their soft juicy nature.

These

These fruit are good and wholesome, both to eat, and occasionally for tarts and mulberry jam, &c.

F I L B E R T.

FILBERTS are fruit of the nut kind, of the family of Hazel-Nut, but larger fruit, and of superior goodness, and very deserving of culture in every garden, orchard, &c. more or less, in proportion to the extent of ground. The trees trained generally in small standards, either detached fifteen or twenty feet distance, or sometimes hedge-ways, to grow up rough, without cutting: and in both of which will produce plenty of fruit in clusters, ripening in August and September, comprising the two following varieties:

White-kernelled Filbert,
Red-kernelled.

Both these varieties of filberts are of equal goodness, though the red kernelled is esteemed the best flavoured. The trees of both sorts will grow freely in any common soil and situation, both in open and shady places; but if in an open exposure, to enjoy the sun, they will ripen sooner, and in greater perfection: and being very desirable fruit of the nut kind, they merit culture in some considerable portion, according to the extent of garden and orchard ground, and in hedge-rows, &c. both for the supply of a family, and very profitable for sale in the markets.

They bear the fruit at the sides and ends of the younger branches; produce male and female blossoms separate on the same tree, the former appearing in Winter and Spring, in small loose amentums or catkins, and the latter in close-sitting cups in the Spring, generally in bunches, and in which the nuts are produced, advancing in growth till Autumn.

The

The trees are of moderate growth, generally branch out low, or divide near the bottom, or sometimes advance with several stems, and may either be trained each with a single stem, three or four to five feet, then to branch out above and form full heads, or permitted to branch out below, nearly in their natural order; though in gardens it is proper to have some trained with single clean stems, as above-mentioned, in half and moderate full standards.

Trees for planting may be procured at most of the nursery grounds, raised to a proper size, with branch heads for immediate bearing the ensuing season, or second year, or in younger growth, as may be required; and they may be raised from suckers, layers, grafting, &c. according to the following directions.

They are propagated or raised by suckers, layers, grafting, and by sowing the nuts; but to raise the different varieties distinct, and with certainty of having the approved sorts continued, it is effected principally either by layers of the young wood, or by grafting them upon seedling or sucker stocks of the filbert or hazel, and occasionally by suckers from the roots, especially of such as are wholly, root and top, of the true filbert kind, and sometimes by sowing the nuts; but the trees raised by the latter method are very apt to vary, and not come with certainty of the true sorts, whereas those by layers and grafting come invariably the same, as also suckers from trees that are wholly the same root and top, as above observed: and all of which will bear sooner than the seedling trees. And the several methods of propagation, except the grafting, may be effected either in the Autumn, in October and November, &c. or in the Spring, in February or March, and in which latter season the grafting is always performed; all of which as directed in these several methods of propagation, in the general arrangement of *Trees* and *Shrubs*.

In the above different methods of raising the filberts, they may be trained in different ways as required, some with single stems, two or three to four or five feet, as before intimated,

intimated, and then permitted to branch out at those heights to form heads: or others may be permitted to branch out low, in a bushy-like growth, for particular occasions; and when, in either method, they have formed tolerable heads, of two or three years growth, or more, may be planted where they are to remain.

Or in raising them by suckers and layers, strong plants, taken up with good roots, and tops of two or three feet growth, or more, may be planted at once where they are to continue, either in single trees or hedge-fashion, as before observed.

They may be planted either in Autumn, or any time in open weather, from the decay of the leaves in that season, October or November, till March; and of which to plant detached standards, set them not less than ten or fifteen to twenty feet distance, or more, to branch out freely above regularly all round in full heads; or some may be planted occasionally in the hedge order, in a row five or six feet asunder, to branch out fully from the bottom, and on the sides and tops, in their natural growth; or sometimes planted in a double row, to form a shady filbert walk, to grow up rough, as above: and in all of which they will bear plentiful crops of fruit.

Some may also be planted in shrubberies, and other plantations in pleasure grounds, in single trees, in upright and bushy standards.

With regard to future culture of these trees after final planting, they will require but very little. Those in standards should have bottom suckers eradicated, and low straggling branches pruned up, also any very irregular growths above; or any planted hedge-ways may occasionally have the same regulation. And, except on these occasions, let the whole advance in their natural order of growth.

The fruit attains maturity in August and September, generally in full perfection when the ends of the calix, or cups, containing the nuts, change brown, and may be gathered accordingly for present use; and when the
the

the whole is fully ripe, may be gathered for keeping a month or two, covering them close from the air, to preserve the kernels from shrinking or drying considerably.

S E R V I C E S.

S E R V I C E S are mostly of the berry-kind, consisting of two species, viz. the Cultivated or Sweet, and the Wild or Sour. The former is larger, and superior in goodness to the latter, and the trees are admitted in general collections, to encrease the variety of fruits, trained principally in standards. produce the fruit in largish bunches, ripe in September and October, of a red and reddish-brown colour; but, somewhat like the medlars, require to lay some time in the house after being gathered, to become soft and mellow, before they are eatable, especially the Wild Service berries:—and consist of the following species and varieties:

Berry-shaped Sweet
Service
Pear-shaped Sweet
Service.

Apple-shaped Sweet:
Service
Wild, or Sour Service.
vice.

These trees are trained principally in standards, and planted in gardens and orchards; but more generally the cultivated or Sweet Service, or a few trees of the different sorts, may be admitted, to encrease the variety, in the fruit-tree collection; and of which the legitimate or true Service produces much larger fruit than the wild, being sometimes the size of small apples and pears, and, when ripe, eats very agreeably, and is therefore in the most general estimation. The other grows wild in woods, in England, &c. and is sometimes admitted in gardens; produces large bunches of berries, like haws, but the berries larger, of a brownish red colour, ripe in October, when being gathered, and hung
up

up in any dry apartment, they keep a month or two in Winter, and, according as they become soft, are proper for eating, being of a tartish agreeable relish. But the Sweet Service is a native originally of the southern parts of Europe, and in this country is obtained only by culture in gardens and plantations.

The trees are propagated or raised by grafting and budding the improved or different varieties upon seedling stocks of their own kind, and trained for full or half standards, &c. by the methods directed for other fruit-trees; or may be obtained at the nurseries, ready raised, when young, or of a proper age and size for bearing.

As before observed, the above trees are trained generally in standards, and, where they are required, may be planted in any common soil of a garden or orchard, &c. at twenty or thirty feet distance: or some of the true or Sweet Service may also be planted in espaliers. And in both of which manage the trees, in regard to pruning and training, as directed for medlars, apples, pears, plums, &c.

They are also occasionally planted in shrubberies, and other pleasurable plantations.

When the fruit ripens in Autumn, gather them in the full bunches as they grow, and hang them up in a dry apartment to soften; then may be used for eating, as wanted.

H A Z E L N U T.

THE HAZEL NUTS comprise several varieties of the fruit, such as the common hazel of the woods, and some other improved varieties, which are sometimes cultivated in gardens, orchards, &c. a few trees of each, or only the principal kinds; either generally in bushy standards, or some planted hedgeways, to run up rough in their natural growth, as observed of the filberts; and comprise the following species and varieties of the fruit:

Common

Common Hazel Nut
Large Cluster Nut
Great Cob Nut

Long Nut
Barcelona Nut
Constantinople Dwarf
Nut.

Of the above sorts of nuts, some of each merit admittance in the fruit-tree collection, more or less according to room, or as may be required; and of which the first sort, common hazel nut, grows abundantly almost every where, in woods and hedge-rows, and are seldom raised in gardens in any considerable quantity; but some of the others being accidental improved varieties, and the Constantinople kinds as a distinct species, a native of Byzanti, are obtained only in gardens by proper culture; and all of which may be planted in the order mentioned for filberts, in single trees ten to fifteen or twenty feet asunder, or some of the common hazel may also be planted hedge-fashion, to run up in a natural order, or planted in more considerable quantity in continued rows, in the manner of coppice plantations, to furnish large supplies of nuts.

The order of bearing of all the sorts is the same as the filberts, explained under that article, being all of the same family.

All the sorts may be obtained in young trees at the nurseries, in larger or smaller growth, as required for planting, in the proper season. Autumn or Spring; and may be raised as directed below.

The trees are raised by nuts, the common sort; also all the sorts by suckers from the roots, and by layers, to continue the different varieties the same: likewise the improved varieties, by grafting them upon stocks of the common hazel; and the Constantinople kind, a distinct species, may be raised either from nuts, suckers, layers, &c. And all of which trained in small standards, some in bushy growths, others in single upright stems, two or three to four or five feet high, or more, branching out above in full heads; then transplanted where they are to remain, in the order and distances above-mentioned.

Or

Or in raising them by suckers, taking them up with as much root as possible, those of a good growth may be planted at once where they are always to stand.

The culture of these trees is only to give occasional pruning, to regulate any very disorderly growths, as observed of the filberts; and to those trained in single standards, in gardens, to clear them from bottom suckers, and any too low growing productions of shoots and branches.

The nuts ripen the latter end of August, and in September, till October, discovering maturity when the cups change brown, as in the filberts, and may then be gathered as wanted; and when wholly ripe, gather and house them for keeping.

R A S P B E R R Y.

RASPBERRIES being desirable fruit in a garden for Autumn service, both for eating as desert fruit, and for making raspberry jam, and used in large quantities by the distillers, &c. plantations of the plants should never be omitted in principal gardens, in larger or smaller supplies, according to the extent of ground; the plants growing in long slender shrubby stems, several from each root, are generally planted in rows, four and a half or five feet asunder, produce young stems from the root annually, and which, when a year old, bear fruit, then decay in the following Winter, being succeeded by others produced the preceding Summer for bearing the year following, the fruit ripening in July, August and September, and consist of the following varieties:

Red Raspberry	Twice-bearing Red Raspberry
White Raspberry	Twice-bearing White Raspberry.
Cane or Smooth-stalked	
Large Antwerp Raspberry (yellow)	

Of

Of the above varieties, the first three sorts are those commonly cultivated for the general production. The Antwerp raspberry is a new sort lately introduced from Germany, a variety of the common raspberry, but is generally of a stronger and taller growth than most of the others, and the fruit larger, of a golden yellow colour, and is esteemed of superior goodness; and the twice-bearing sorts are in estimation for their singular property of bearing two crops of fruit the same year, the first production being in July and beginning of August, and the second in September; are all of hardy growth, will succeed in any common soil and situation, both in open exposures, and in shady borders, &c. though it is most eligible to have the principal supply in a free exposure open to the sun, to ripen the fruit in the best perfection; are generally planted in the kitchen-garden, in rows four feet and a half by a yard distance; and some may also be disposed in the borders, &c. in single stools, at ten, fifteen, or twenty feet distance; likewise are sometimes planted a few in espaliers, and against South and other walls, for early and late fruit, and of improved size and flavour.

All the sorts of raspberries grow with several stems or suckers produced from the root every year, in Spring and Summer, which when a year old produce the fruit, and at the same time a succession of young stems rise from the bottom, and in Winter following those which bore the fruit last Summer wholly decay, and are then cut down close to the ground, leaving several of the strongest young shoots on each stock to bear the ensuing year; and thus the succession of bearing shoots is continued,

They are propagated by the young sucker shoots produced annually from the root in Spring, as above explained; and these, when of one Summer's growth, are proper to detach for planting in Autumn following, or in the Spring, in February or March, but not later than the beginning or middle of April.

Observe in procuring the above shoots for planting, generally chuse the strongest outside productions. Dig them

them up with good roots, and if at the bottom they discover one, two, or more small buds, the rudiments of advancing shoots for successional bearers, they are particularly to be preferred. Prune the roots, cutting off any hard woody part, especially of the mother root, if any adhere, and shorten long stragglers, and prune off the weak bending part at top of the stems, leaving them about a yard long: then, having prepared the ground, by adding a supply of good dung, and this digged in one full spade deep, levelling the surface, and in which plant the raspberries in rows, four and a half or five feet asunder, by three feet at least in each row, planted either singly, or two or three plants together, closing and treading the earth close about the roots.

Likewise may plant some in espaliers, or stakes placed to train to in that order; also some may be planted against walls of a South exposure: and in all of which plant them ten feet asunder, either singly, or two or three plants in each place. The stems of the plants only shortened moderately at top, and trained horizontally to the espalier, stakes and wall, &c.

After planting the raspberries, keep them clean from weeds all Summer, by hoeing the ground between them occasionally; and permit the successional supply of young shoots to advance from each main root, in their full growth.

They, if strong plants, will both produce a moderate crop of good fruit the ensuing Summer, and proper supplies of young stems for bearers the following year, but in the second Summer will bear in full perfection, and furnish plenty of successional bearers; and the same plants will continue several years of a good prolific state, in the order before explained.

The general culture of raspberries consists of an annual pruning, necessary every Winter, to cut out the old decayed stems, last Summer's bearers, and to thin, where too abundant, the young succession shoots, that are to bear the fruit the ensuing season; then to dig

dig the ground between the plants: and in Summer, to hoe them clean from weeds, as before intimated. And always let the production of successional young shoots, rising immediately from the main stools, advance all Summer in their full growth, and only, in that season, to clear out any large stragglers, casually advancing between the rows, &c. that they may not incommode and keep the sun and air from the present bearers, and their production of fruit.

The necessary general pruning is performed any time from October or November till February or March, or beginning of April at latest, in which cut out all the decayed old stems, easily distinguished from the young, breaking or cutting them clean out to the bottom. At the same time select a proper supply of the strongest young shoots on each main stool, three or four to five or six at most, according as they may occur, and cut the rest clean away to the bottom, clearing out also all small straggling suckers between the main stools, and let each of the retained shoots be pruned at top, cutting off the weak bending part; after which, if the shoots are weakly, and straggling much asunder, they may be tied or plaited together, to preserve them in an upright growth.

Then, when pruned as above, clearing away the cuttings of the shoots, &c. dig the ground between the rows of plants, and let all straggling suckers remaining between the main stools be eradicated clean out by the roots.

After this, the principal care is to hoe them clean from weeds in Summer, as before suggested, and to clear away straggling suckers between the main stools, that the free air and sun may be admitted fully, to promote the growth and ripening of the fruit in good perfection.

If any are planted against walls, or in an espalier order, give the requisite pruning as above, in Winter, to cut out the old stems, retaining several strongest young ones on each stool, cutting away the others, and the retained shoots trained to the wall and espalier,

or

or to stakes, horizontally, and they will thus generally produce earlier and larger fruit.

The fruit in general ripens in July and August; and the twice-bearing sort produces also a moderate crop again in September: and all of which should be gathered for present use according as wanted, as after they are fully ripe, they will not keep above a day or two before they mould, become maggoty, and spoil.

G O O S E B E R R Y.

GOOSEBERRIES are very useful family fruit, both in their young green state, for pies, tarts, puddings, sauce, &c. also to preserve by bottling up for long keeping; and in their mature ripe growth are very agreeable to eat: so that the trees or bushes should be admitted plentifully in every garden, generally planted either in a row, round the borders or the main quarters of the kitchen-garden, or some in cross rows; and in large grounds are occasionally planted in continued plantations, to procure more considerable supplies of fruit, especially for market: and in all of which they seldom fail of furnishing large crops of fruit annually, for use in their green state in April, May, and June, and ripe in June, July, and August, in the different varieties, consisting of the following principal sorts:

Early small Red
Early small Black
Early Green
Large smooth Green
Large hairy Green
Hairy Red
Large round Red
Long hairy Red
Large smooth Red
Scarlet

Red Champaign
Large white Dutch
Large Amber
Long Yellow
Round Yellow
Crystal White
Rombullion
Ironmonger Gooseberry
Hunt's Gooseberry
Green-gage Gooseberry

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Red-

Red-raspberry Gooseberry	Admirable
Warrington Red	Hertfordshire Red
Damson Gooseberry	Lancashire Farmer
Green Donington	Cherry-berry,
Goliah	

With many other varieties of Reds, Greens, &c.

The above being the principal kinds of Gooseberries, there are many other intermediate varieties, which of late years have been raised from seed, especially of the reds and greens; and in all of which the trees or bushes are very hardy to grow in any common soil and situation; are most commonly trained in standard bushes, either branchy from the bottom, or with low stems, six to twelve or fifteen inches, then branching out at that height into full heads; and in which are generally planted in the kitchen-garden, sometimes in a row round the boundary of the principal quarters or outward borders, others in cross rows to divide large quarters into smaller compartments, twenty or thirty to forty or fifty feet wide; and often in continued plantations, in rows six to eight or ten feet asunder, by six feet in the rows, as in the numerous large market grounds round London, where there are sometimes very considerable plantations in that order of planting, to produce large supplies of berries for the markets. Likewise gooseberries are sometimes planted in small portions against South walls, and trained in the wall-tree order, to furnish earlier fruit, both to use green and when ripe.

All the varieties of these bushes, or shrubs, bear their fruit both on the young wood of a year old, and on the several years old branches, generally upon small spurs and snags emitted along the sides thereof, the same branches and spurs continuing several years fruitful; and if the branches are kept moderately thin, not cut down too much, and according as any grow disorderly or become of an unfruitful nature, or decay, they are pruned out, and young wood retained occasionally, as hereafter explained, to supply the places thereof,

thereof, the trees may thus be continued long in good fruitfulness, and will always produce full crops of large fruit in proportion.

Young trees for planting may be obtained in good perfection, in most of the public nursery-grounds, raised to a proper growth for immediate bearers; generally choosing such as are of some advanced growth, with tolerably full heads to bear some fruit the same year, if early planted, and that will soon commence full bearers.

Or they may be expeditiously raised abundantly by cuttings and suckers, &c. according to the following directions, and will commence bearing in two or three years.

Gooseberries, in all the varieties, are easily propagated and raised by cuttings of the young shoots, and by suckers from the root, by either of which may increase any of the approved sorts; and by seed to raise new varieties, as by which they are exceedingly sportive in many different sorts, in regard to colour and size of the fruit; and each sort so obtained, or any sorts approved, may be raised and continued the same by cuttings and suckers, though it is contended that cuttings are preferable to suckers, in sooner commencing good bearers, and not so apt to run to suckers as the sucker-raised plants. However, the difference is not very material, and good trees may be raised by either method; and as suckers of one, two, or three years growth may be planted, and being furnished with roots, they at once form immediate plants, sometimes furnished with a small head of branches above.

To raise them by cuttings, it may be performed either in Autumn; about October, November, &c. or in February or March; and for which chuse the strongest strait outside shoots of last Summer, cutting them off about ten or twelve to fifteen or eighteen inches long, as they may occur, and prune the weak slender tops; then plant them by dibble, either in a shady border, or where convenient, in rows twelve to fifteen or eighteen inches asunder, inserting them one

third, or not more than half way into the ground ; and in the following year, when they advance in shoots above, trim off the lower growths, retaining a good upright top shoot to run up for a stem, six to twelve or fifteen inches, then may be topped to encourage branches above to form the head : though some permit them to branch out in a bushy growth quite from the bottom ; but when the branches come out so low, they encumber the ground immediately under them, are hurtful to the growth of under crops, and incommodious to dig, or perform other necessary culture in the ground, and I would therefore advise to train each with a clean single stem, at least six or eight to ten or twelve inches, and in which the bushes will have also a more regular appearance.

By suckers from the roots.—These are generally produced plentifully in Summer, and which in Autumn, Winter, or Spring following, or when of two years growth, may be dugged up with roots to each, taking those of the strongest and straightest shoot, pruning any broken and hard woody part of the root, and shorten the top to twelve, fifteen, or eighteen inches, according to their strength, and plant them in nursery rows fifteen or eighteen inches asunder ; or some strong robust suckers, furnished with branchy tops, may be planted at once where they are to remain : and in all of which train each with a single stem below, eight, ten, or twelve inches, or more, then branch out above to form the head.

In the formation of their heads, give any necessary assistance in pruning out low straggling shoots, cross-placed growths above, or other irregular productions, and to reduce any casual long rambler equal to the general branches, all which generally permit to extend in their natural growth, without much shortening, or none at all, except any singularly long or very bending inclining shoots ; or where the branches are too crowded, thin them accordingly to five or six inches distance, and they will thus bear plentifully, and produce large berries.

Or

Or sometimes old gooseberry bushes having been permitted to advance with several stems from the root, each furnished with a head of branches of one, two, or several years growth, they at the proper season, Autumn, Winter, or Spring, may be dug up, and divided into so many distinct plants, with roots to each, and planted where they are required, and will commence immediate bearers the ensuing season.

To raise new varieties, save seed from some sweet thoroughly-ripe gooseberries, sow them in Autumn or Spring in a bed of light earth, and when a year old plant them out in nursery rows, and train them as above; they will bear the third year, when those of good properties may be marked when the fruit is ripe, and then, at the proper season, transplanted where they are to remain.

When designed to plant gooseberries, the proper season is any time, in open weather, from October or November till March. Generally, as before observed, when they are to be procured from the nurseries, have, if possible, such as are advanced with tolerable full heads, of a proper size for bearing; planting some in a single row, along the boundary or borders round the main quarters of the kitchen ground, at five or six to eight or ten feet distance, or in large quarters plant some in cross rows the same distance, to divide the ground into smaller compartments, twenty or thirty to forty or fifty feet wide, as formerly intimated; and when large quantities of fruit are required for market, &c. they are planted in continued plantations, in rows six or eight to ten feet distance, by five or six feet in each row.

A few trees may also be planted against South and other walls, to have earlier and larger fruit, and on North walls to ripen late in succession; and for which purposes the trees should be trained with branches advancing near the ground, and nailed to the wall in regular order, three to four or five inches asunder; and in all of which will produce fruit in superior perfection.

Or some in standards may also be trained in a fanned expansion, cutting off the projecting branches and shoots on two sides, to have the continuing branches range only two ways, not to overspread the adjacent ground; and may either thus stand detached, or trained to stakes; and in which order of training them, the branches being kept thin and regular, they will produce most large and fine berries.

After they are planted, they, in their advancing and full growth, will require occasional pruning, principally every year in Winter, especially as these bushes generally produce many lateral shoots in Summer, that crowd and confuse the heads, more particularly when the shoots and branches have been much pruned or shortened, which latter should therefore be but moderately performed, or not at all, except in particular instances.

However, with regard to the requisite pruning of these bushes, in their advanced growth it will be necessary, both in the young shoots, and occasionally in the older branches, and to be performed principally in Winter, any time from October or November till March; observing, that where the last Summer's shoots are numerously produced in a crowded growth, on the general mother branches, cut out close most of the side laterals thereof, leaving only some in casual vacant parts below, or where they may seem necessary, and generally a leading one to each mother branch; or where any principal branches, together with the present terminal leading shoot, are advanced too considerably in length beyond all the others, prune down the said branch or branches, less or more, to some lower young branch or good shoot, to remain for a leader; and where the general branches are too crowded, thin them regularly five or six inches distance, at least, at their extreme parts, cutting out all casual cross-placed and low straggling growths, and reduce any long ramblers; as likewise, when any old branches assume a worn-out state, or become of an unfruitful nature, or decayed, prune them down, leaving some advancing younger branch or strong shoot to supply
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the place, if required; and the general shoots now retained, either leave intire, or shorten but moderately, or rather not at all, except where any leader, or other shoot, is singularly long, or of a crooked inclining growth, which may be shortened accordingly: but, except in these instances, it is more adviseable, agreeable to the above rules, to leave them mostly at their full length; and thus they will not run so much to wood in Summer, crowding the trees and fruit, as is the case when the shoots are generally shortened.

Observe also to eradicate root-suckers, and prune up low lateral shoots and branches; and always keep the general branches moderately thin and regular, and the middle of the trees somewhat open. They will thus continue plentiful bearers, and the fruit will always be larger and finer in proportion.

Or also, in Summer, when any trees are confusedly crowded with young shoots of the year, to shade and darken the fruit, they may be pruned in a thinning order, to open the trees to admit the sun and air, to ripen the fruit with a good flavour.

Though some people, regardless of these trees, give them occasional pruning by clipping them with garden shears, cutting them into close round heads; but by this they grow crowdedly full of young wood every Summer, and the fruit is always very small.

If any are planted against walls, or in the espalier order, train the branches in a regular fanned expansion, three or four to five or six inches asunder. Prune them in Summer and Winter from superfluous and fore-right and other irregular shoots, leaving some well-placed in vacancies, or to supply the place of worn-out branches; and generally a leading shoot to each principal branch, agreeable to the method explained in pruning the standard bushes; and train the general branches mostly at their full length, as far as room of walling, &c. admits, and when advanced out of bounds, may be cut down less or more, according to the rules observed in pruning the standard bushes aforesaid; and according as any unfruitful branches and dead wood

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occur,

occur, cut them out in the general pruning, and retain young to supply the vacancies. They will thus produce early and large fruit.

The gooseberries, in their green and ripe state, are proper for use from April or May till August. The young green berries will, in some early trees against South walls, be fit to gather in April, and in general supplies in May and June,—very useful for pies, tarts, and other culinary purposes; and in the beginning of June, when of full growth, before they begin to ripen, a quantity may be gathered, and bottled up, the cork sealed down close with wax or rosin, to exclude the air, and placed in a cellar, or buried in the ground, will keep good several months: and in their mature growth of ripeness, are in perfection, in the early and late sorts, from the middle of June till the end of August; or some late ripeners, if in the full sun, may be matted, to shade them, and thereby will continue longer.

C U R R A N T.

CURRENTS are very agreeable Summer fruit, useful principally in their ripe state, or occasionally when green for tarts; but when ripe are good and wholesome, both to eat as desert fruit, and for various culinary occasions, also to make currant wine, jelly, &c. and to preserve: and black currant jelly is useful as a medicine; and therefore the trees of the different varieties should be admitted plentifully in gardens, but most of the red and white, planted both as standard bushes round the quarters of the kitchen garden, and in cross rows, or occasionally in continued plantations, as observed for the gooseberries; likewise some finest sorts against South and other walls, for early and late fruit, which in the different sorts ripen in June and July, and may be continued till September. Consist of the following species and varieties:

Common

Common Red Currant
Large Red
Brick-coloured

White Dutch Currant
Champaign
Black Currant.

Of all the above sorts of currants, the trees are very hardy, will grow and bear plentifully almost any where, in open and shady situations; and by which the fruit may be obtained early and late, in two or three months succession, from June till September, especially if some of them, in July or August, are matted over to defend them from the sun, those fully exposed thereto, and from the birds.

The general supplies of these trees are commonly trained in small bushy standards, very commonly branching out near the ground, or sometimes in several stems quite from the bottom; though I would advise them to be trained principally each with a single stem from the beginning, six or eight to ten or twelve inches, then to branch out above into regular heads; or for walls, or to train in the espalier order, they may branch out near the bottom.

These trees bear the fruit principally on the two or three and several years old wood, from small spurs and snags situated along the sides of the branches, which continue many years fruitful; and that, according as any old bearers decline being fruitful, or assume a decaying state, they being pruned out, and young wood retained from below to supply their places, the same bushes will continue long in good bearing.

All the sorts may be raised abundantly by suckers from the roots, and cuttings of the young shoots, and will begin bearing in two or three years.

Or young trees for planting may be had at all the public nurseries, raised to a proper age and size, with full heads, to commence immediate good bearers.

To raise supplies of these bushes, plant cuttings of the young shoots, or young suckers from the roots of

one or two years old, or more, any time in open weather, from October till March; and that, with regard to the difference in raising them by cuttings or suckers, it may be observed as said of the gooseberries, the trees raised from cuttings are thought not to run so much to bottom suckers as the sucker-raised trees, and that they sooner bear; but in either of these the difference is not considerable, and strong sucker plants, as being furnished with immediate roots, they at once form proper plants.

However, to raise them by cuttings, take the strong strait shoots of last Summer, cut about ten or twelve to fifteen or eighteen inches long; plant them in rows twelve to eighteen inches asunder, each near half-way into the ground; they will emit roots below and shoots at top, in Spring and Summer. Generally prune up some of the lower shoots, to form a clean stem, six or eight to ten or twelve inches, as before intimated, then to branch out at top to form a regular head: or for walls, &c. they may branch out quite from the bottom. And in all of which, when of two or three years growth, may be transplanted into the places where they are to continue.

Or by suckers, dig up some of the strongest bottom shoots, of one or two years growth, with roots to each, and planted in rows as directed for the cuttings, and trained in the same manner; or some, that are of strong growth, and furnished with top shoots or branches for a head, may be planted at once where they are to remain, — the others transplanted in one or two years, when of some advanced growth.

Or any currant bushes having advanced with several stems from the root, of two, three, or several years growth, and each stem furnished with a head of branches, they may be slipped or divided clean to the bottom, into so many separate plants, with roots to each, and planted finally to remain; and, as having sometimes good full heads, will commence immediate bearers, in the proper season.

Planting

Planting of currants may be performed any time, in open weather, from October till February or March; when, if the ready-raised trees are to be procured from the nurseries, have them advanced with tolerably full heads, for immediate bearers; as also of home-raised plants the same. Generally have a good supply of the standard bushes planted in rows round the quarters, or outward borders thereof, in the kitchen garden, or some in cross rows, to divide large quarters, as observed of the gooseberries; and in both methods planted five to six, eight or ten feet asunder. Also, for large supplies of fruit, are planted in continued rows in full plantations, in rows six to eight or ten feet asunder, by five, six or eight feet in each row.

Likewise it is proper to plant a tolerable portion against walls, especially of the white and red currants, some against South exposure for early production, and others may be on East, West, and North walls, planted ten feet distance, or in vacant spaces between wall-trees; and the branches nailed thereto, four to five or six inches distance, mostly at full length without shortening, as far as room admits.

Also some may be trained in a fanned spreading order, in the borders or divisions of the quarters, cutting away the branches on two sides, and the others to range only two ways, to the right and left, the way of the row; either to grow detached in that order, or trained occasionally to stakes at first, in the manner of espaliers: and the branches thus will not overspread the ground, and being kept thin and regular, they will bear in great perfection.

The currants planted in all the above methods, when advanced in full heads, should generally have an annual pruning, especially as they generally produce numerous unnecessary crouding shoots every Summer; as also to regulate improper growths in the old branches: performing it principally in Winter for the general pruning, and occasionally in Summer in the young shoots, where they are considerably crouded.

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The general pruning may be performed any time from October or November, till March; in which, in trees of some advanced growth, that as numerous lateral shoots will have advanced the preceding Summer on the main branches, they should be mostly now cut out close; or small twiggy shoots may be cut to snags of an inch or two long, to remain for bearing, or the small short ones left intire for the same occasion; observing generally to have occasional good shoots below in any vacant parts, or to supply the place of improper old wood, and a leading shoot to each main branch, either at the termination thereof, or if any branches are advanced considerably longer than the rest, they may be shortened down either to a young shoot or lower branch furnished with a proper shoot for a leader; and in the general branches, if any are too close or ill-placed, or of a decaying or unfruitful nature, cut them out, retaining young to fill the places where necessary, and trim up low stragglers, keeping the branches moderately thin, not less than about six inches asunder, and in some regular order, with the middle of the trees kept somewhat open; and the retained shoots may either be shortened moderately, less or more, in general, or such only as advance much longer than the others: or the rule is, if required to keep these standard bushes to moderate heads, the shoots may be shortened in proportion; but generally observe, in any lower shoots advancing to supply casual vacancies, they should not be shortened till advanced at least equal in height with the general branches of the head; and it is proper to clear out all root suckers, and to trim off lateral shoots from the stem.

Or in Summer, when these bushes are very crouded with young wood of the year, it may be thinned in May or June, cutting it out more or less, to admit the sun and air to the fruit.

Any trained against walls, or in fanned standards in the open borders or quarters, trained in the manner of an espalier, as formerly mentioned, should also have an annual pruning. Those against walls in particular should

should be pruned both in Summer and Winter ; a Summer pruning to cut out the foreright productions, superfluous and ill-placed shoots, training in the others, and the principal leading shoots, at their full length ; and in Winter, where the shoots were left too abundant in Summer, should now be cut out, together with such others as may appear unnecessary or improper, leaving a sufficiency to supply vacancies, and generally a terminal one to each main branch, where room to extend them ; or if too long, it may either be pruned, or the branch cut down more or less to some lower shoot, &c. And in the general branches, if any appear of an unfruitful or decaying state, cut them out, and have young to succeed them leaving the shoots mostly intire, except where advanced beyond their proper limits at top, or sides, when they may be shortened in proportion, or the branches from whence such proceed pruned down occasionally to some lower shoots, agreeable to the above hints ; then nail the whole in regular order, four or five inches asunder. Likewise in those trained in the espalier manner, give a necessary pruning, cutting out the foreright or projecting shoots and branches on both sides, to preserve the fanned expansion ; as also all superfluous or overabundant wood, agreeable to the foregoing directions in the wall currants.

In the different prunings of currants, observe to leave the small spurs, and short shoots of two or three inches long, or little more, for bearing ; and according as the spurs and said shoots decay, cut them away, and young ones will advance to succeed them.

The fruit of currants in general ripen in June and July, and continue in perfection till August ; or if preserved from birds and the full sun, by matting some trees of the late fruit, they will remain good till September ; and in the above seasons of ripening, let them generally acquire full maturity, and then gathered as wanted, they will seldom be too ripe.

BERBER-

B E R B E R R Y.

BERBERRIES are in request in some families to preserve and for candying, and occasionally as garnish to dishes when served to table; and for which occasions a few of the trees are admitted in garden or orchard plantations, trained principally in small standards, which produce abundance of fruit, consisting of small red berries in loose bunches, ripe in September and October, of an astringent taste, comprising the two following varieties:

Common Red Berberry,
Stoneless Red Berberry.

These are both varieties of one parent species, and of which the first is the common sort, being furnished with small stony seeds; and the other, being an accidental variety thereof, is entirely without stone, and for which peculiarity it is preferred to the former, for the æconomical occasions of preserving, candying, &c. though both the sorts are occasionally used; but as the trees of each are easily raised, and the same method of culture is applicable to both, it is most eligible to have principally the stoneless sort, as the berries, consisting wholly of pulp, without any stone, are more fleshy and agreeable.

In both the varieties, the trees are of a hardy nature, will succeed in any common soil of a garden or orchard, &c. generally allotting them an open situation.

The trees are commonly raised in small standards, with three, four, or five feet stems, branching out above into full heads, producing the fruit at the sides of the young and several years branches; and are planted in gardens or orchards in moderate supplies, for family occasions, or as may be required,—planted in Autumn or Spring, at twenty or thirty feet distance.

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The trees are raised for sale in the nurseries, and where, if required, they may be obtained of a proper growth for immediate bearing.

Both the sorts are propagated or raised by suckers, cuttings, layers, and occasionally by grafting; or the common sort also by seed: but to raise the stoneless kind, it is effected either by cuttings of the young shoots, layers, or grafting, and likewise by suckers from the roots of trees that are wholly of that sort, root and top: and all of which may be performed in the Spring; or the cuttings, layers, suckers, also in Autumn, in October, November, &c. or the seeds may likewise be sowed in those seasons; and being planted in nursery rows, train them each with a single stem, two or three to four or five feet, then to branch out and form heads.

When designed to plant these trees, either procured from the nurseries or home-raised, generally have them of some advanced growth, furnished with tolerable heads of branches; and may be performed any time in open weather, from October or November till March or April, planting them the distance before mentioned.

In their general growth, permit them to branch out freely above; give only occasional pruning, to cut or reform any irregular productions in the head, and to prune up low stragglers and lateral shoots from the stem, &c. and eradicate root suckers.

The berberries ripen in September and October, when they may be gathered as wanted for present use; and as they will be wholly ripe in October, should be all gathered, or as many as required, always gathering them in bunches as they grow.

W A L N U T.

WALNUTS are desirable shell-fruit of the nut-kind for Autumn eating; also in their green state, consisting of the outer coat and internal part together, before they stone or become hard internally, are
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in great estimation for pickling, being proper to gather for that purpose in July and beginning of August; and for which occasions the trees deserve culture, more or less, according to the extent of ground, but more especially in large orchards, parks, hedge-rows, and any out premisses; and in which they are also very profitable in their production of nuts for sale. The nuts ripening in September and October, consisting of the following varieties:

Early oval Walnut	Large Walnut
Common oval Walnut	Large double Walnut
Round Walnut	Tender shelled Walnut

The trees of all the varieties are of large lofty growth, with considerable spreading branches, all hardy to grow in any common soil and open situation; are always trained in full standards, and generally require to be of some considerable growth before they bear in any tolerable abundance; and when advanced with large full heads, they produce vast quantities of nuts in favourable seasons, bearing the fruit mostly on the young wood, towards the extreme parts of the branches, commonly two or three together in a bunch. The trees producing male and female flowers separate, the former in small loose catkins, the latter in close-fitting buds, and in which the fruit is produced as above, each inclosed in a large outer husk, or green cover, and when this begins to open naturally, the nuts are in full maturity, and fall out of the husk; though they are often gathered before that state of full perfection, especially for the markets, while the green cover closely adheres; but being laid in a heap a few days, the husk shrinks from the nut, and may readily be detached. However, when permitted to remain on the trees till they discover full ripeness, are always much better flavoured, and will keep longer in good perfection.

In gardens or orchard grounds, &c. of any tolerable extent, these trees merit admittance in smaller or larger portions; or even in moderate premisses a tree or two may be admitted: but in extensive grounds, in orchards, parks, &c. as before observed, they are deserving of culture

culture in some considerable quantity, both to furnish the family with plentiful supplies of nuts, and large quantities for sale to those who carry them to the markets; and the trees advanced to a large magnitude, the timber is valuable for many purposes in joinery, cabinet-making, and some other mechanic trades.

Like most other trees, they will grow the most thrivingly in good ground; but they will also succeed in any common soil and situation.

They may be planted in any outward or inferior part of a garden, &c. and towards the boundaries of orchards, or in continued rows therein, distinct from other fruit-trees of a more moderate growth; and in extensive situations in parks, fields, or any out-premises, they may be introduced in single, double, or continued rows of considerable extent, or in a row along any out-boundary, or in divisions of out-grounds, &c. And in all of which planted not less than thirty to forty or fifty feet asunder, as they advance considerably in large sprouting heads.

Young trees for planting may be had at most of the nurseries, trained in standards, advanced with full stems five or six feet, or more, and with tolerably full heads.

They are propagated or raised both from the nuts, to raise any sorts indifferently as they may occur, and by layers and grafting, to continue any particular varieties distinct. The nuts may either be sowed in Autumn, or preserved in sand from the weather and vermin till February, then sowed in drills two inches deep; and when the young seedling-trees are one or two years old, plant them in nursery lines, and trained each with a single stem five or six feet or more, then to branch out to form the head, and when of some advanced growth, then transplanted finally to remain: and layers may be made in Autumn or Spring, of young shoots produced near the ground from proper stools for that purpose; they will be rooted in one year, to plant off into nursery rows for training as above: and grafting is performed in February or March, of the desired sorts,
upon

upon seedling walnut-stocks. And in all of which, when the young trees are advanced with proper stems and formed heads, they may be finally transplanted.

Sometimes nuts are planted at once in the places where the trees produced therefrom are to continue, thereby not have any check by removal.

In the advancing or general growth of walnut trees, they may generally branch out above in their natural order, or may give occasional pruning to regulate any casual disorderly growths in the head, or to reduce rambling branches extending considerably beyond all the rest, and to prune up low stragglers; and, except in these instances, permit them to advance freely above, according to their natural order, branching out regularly all round in large spreading heads.

Walnuts, in the early sorts, ripen in tolerable perfection to begin gathering towards the middle of September, the other in the latter end of that month and beginning of October, and may be gathered for present use as wanted; and when fully ripe, gather the whole, and housed for keeping.

When they are required green for pickling, they are generally of proper growth the middle or latter end of July and beginning of August, while the internal part remains tender and fleshy, before they begin to stone or shell of a hard substance, easily known by thrusting a pin or needle in; and, for this occasion, they are gathered whole, the outer green cover and inner part together, generally gathering them by hand, and such as are as clear from spots as possible.

The ripe walnuts discover full growth when the outer husk begins to split, ready to discharge the nuts, or when the said husks will readily detach from the shell. They, on moderate trees, may be gathered by hand; but in those of large extended branches, as the fruit grows generally near the extremities, the nuts are commonly threshed, or beaten down with long poles.

When they are gathered, clear the nuts from the outer green husks; or if these at first adhere closely to the
the

the shell, lay them together in an heap for a few days, they will then readily detach. Wipe the nuts clean, and house them in a dry apartment, and covered close with straw to exclude the air; or lay some in dry sand, that they may keep longer in good condition for eating.

C H E S N U T.

CHESNUTS are sometimes admitted in fruit-tree collections, in extensive grounds, seldom in small gardens, or those of moderate compass, especially as the trees are of considerable spreading growth, and long before they bear any tolerable quantity, and as the fruit does not always ripen in this country in full perfection in size and flavour; however, as in favourable seasons they sometimes acquire tolerable maturity, some trees may be introduced in large orchards, parks, &c. and of which there is only one principal variety proper for culture, *viz.*

Cultivated, or Spanish Chesnut.

This tree grows to a lofty stature and large magnitude, with a considerable spreading head adorned with large beautiful spear-shaped foliage; is always raised in full standards, and produces the nuts in large prickly cups, two to three or four in each, ripening in September, when the outer capsule opens in four divisions to discharge the nuts, which in warm dry Autumns sometimes attain tolerable perfection, though rarely in equal goodness, either in size or flavor, to those annually imported from Spain and Italy.

Trees of this sort are raised plentifully in all the nurseries, where they may be obtained for planting, either in young or of some considerable advanced growth, with full stems and moderate branchy heads.

They are raised both from the nuts, as directed for the walnuts, and also the improved sort by layers and grafting;

grafting; and in all of which train each with a clean single stem, five or six feet or more, then branch out above to form the head.

These trees may be planted in the borders of orchards, or in any capacious spaces in parks, and to form spacious avenues, walks, &c. or planted in a row along an out-boundary or where convenient, in smaller or larger portions, as may be thought eligible, or as required, planting them thirty or forty, to fifty feet asunder.

In their growth, permit them to branch out mostly in their natural order. They will require but very little culture, or only to prune occasionally any casual irregular branches of the head, &c. as observed of walnuts and other standard fruit-trees, when it may appear necessary.

The chensuts ripen in September, discovering maturity when the outer capsule begins to open for the discharge of the nuts; then may be gathered, cleared out of the husks, and those designed for keeping should be housed, and covered close from the external air and damps, &c.

ELDER-BERRIES.

ELDER-BERRIES are esteemed only for their juice, with which to make elder-wine, a very agreeable cordial beverage for Winter, &c. and for which the trees are admitted in out-premises in standards, and to grow up in rough hedges, often planted along the sides or tops of banks and ditches, or boundaries of orchards, and in hedge-rows, &c. producing ripe berries in September, in large umbellate bunches, consisting of only one variety, commonly used for the above purpose, viz.

Black Elder-Berry.

The elder-tree is very hardy, will grow any where in open or shady places, and for its production of berries.

berries for making elder-wine, as above suggested, it merits culture in any outer premises, either a few trees in standards, or in hedges, to grow up rough in a natural order above; and in all which will furnish plentiful crops of berries, produced towards the ends of the younger branches in large bunches, ripe for gathering in September.

It is raised by cuttings of the young wood, and by seeds.

These trees may be planted in any waste or out-grounds, or in hedge-rows, or on the sides of ditches and banks, on the boundaries of gardens, orchards, fields, or by sides of water, &c. or where convenient, as they will thrive in situations not so eligible for other kinds of fruit-trees; and if in outward exposed places, the fruit is not so liable to be pilfered as most other sorts. Likewise where planted in hedges, in particular districts, it will both serve as a fence, and produce abundant crops of berries.

They may be planted both in ready-raised trees of young growth, in standards, fifteen or twenty feet distance, and in hedges one foot asunder, to grow up close for a fence; or for both of which, cuttings of the young shoots may be planted in the Spring, in the places where they are designed to remain.

To raise elder trees by cuttings, perform it principally in the Spring. Chuse the strong young shoots of last Summer, cut into lengths of half a yard to a yard long, or more, and may be planted either where they are to remain, or in a nursery for a year: inserting them near a foot into the ground, they will readily emit roots below, and shoot strongly at top.

Those designed for standards should be planted in any situations above-mentioned, ten to fifteen or twenty feet asunder, and trained each with a single stem, three to four or five feet high, then to branch out above to form spreading heads, and advance nearly in their natural order.

And to plant them in the hedge order, the cuttings may be inserted into the sides or tops of banks or ditches, &c.

&c. a foot asunder, and permitted to branch out from the bottom; cut in on the sides, if required to have the hedge thick and somewhat regular below; and may run up at top in full growth, to produce large crops of berries.

The trees may also be raised from seed of the berries, sowed in Autumn or Spring, in a bed or border, for planting out when one or two years old, in the seasons above mentioned, in a nursery, to train for final transplanting.

The berries ripen the middle or latter end of September, to gather for immediate use, in which the berries are stripped off the bunches, and the juice thereof expressed; then is prepared to a proper quality, boiled, scummed, afterwards is worked off with a little yeast, and then tunned or barrellled up for use, as wanted.

T H E

KITCHEN GARDEN DISPLAYED,

WITH THE

Description and Culture

O F T H E

VARIOUS ESCULENT PLANTS.

AS a kitchen garden is certainly most desirably useful and profitable in its numerous annual productions both of herbaceous vegetables, for the supply of a family and market, and to admit of the cultivation of fruit trees, producing good crops of fruit in the best perfection on wall trees, espaliers, and standards, it is of importance to assign an eligible portion of the most fertile ground the premisses afford for that purpose, and in dimensions from a quarter of an acre, or even half that, or less, as the situation admits, or the supplies required in a family, to half an acre, or one, two, or more acres, according to the consumptions of herbage roots, fruits, &c. in small, middling, and large families, or for public supply; having the ground, if possible, of the best quality, of a moderately lightish pliable mellow nature, one full spade, or two spades deep in good fertile earth, in a situation open to the free air, and full sun as much as possible, and not too low and wet at any season, the soil either of a blackish, brown, or hazelly colour; or a moderately light loamy kind, or fat sandy loam is very desirable, and eligible for the growth of most plants and trees.

Either

Either allot a necessary portion of ground wholly for the kitchen garden, where there is sufficient scope and choice of soil and situation, or if limited, may have the kitchen ground, fruit plantations and flower compartments all in one, assigning the larger main quarters for the production of herbaceous esculents, and in the outward borders have wall trees, and espaliers; with some standards in the internal divisions; and the borders next the main walks for flowers.

The ground should be enclosed with a wall paling or hedge, both for security, and the advantage of shelter, and to afford an opportunity of having warm borders for early crops and Winter standing young plants, as well as to furnish shady borders for particular small plants in Summer; but a wall or close paling, fence, is also of great additional advantage for the convenience of having wall trees.

Having the ground enclosed, it should be digged or trenched one or two spades deep, and divided into compartments; a border formed next the wall, or other outward fence, four to six, eight, or ten feet wide, a walk next to that of proportionable width, then a four, five, or six feet wide border, and within this, have the main or principal large quarters for the general crops, or in large grounds, or as may be required, a walk may be extended along the middle with a border also on each side; the internal quarters may be divided in larger or smaller compartments, beds, &c. suitable to the sowing and planting the several crops; and where there are walls or paling fences, &c. the borders under them may be planted with the choicest kinds of wall fruit, at fifteen to eighteen, or twenty feet distance; and in the borders which immediately surround the main quarters, and next the walks, may plant a range of espalier fruit trees, four to five, or six feet or more from the outer edge, and fifteen to twenty feet distance in the row; also in the interior quarters have some standard fruit trees arranged thinly not to overspread the ground, or not nearer than twenty-five, or thirty to forty feet asunder, as likewise some gooseberry and currant bushes should
never

never be omitted, planted either in a single range round the internal large quarters six or eight feet apart, or some in cross rows to divide the ground into compartments of twenty to thirty or forty feet wide; also occasionally in continued plantations; and have also plantations of raspberries, in the above order, or in continued rows, four feet and a half distance by three feet in the rows.—See the *Fruit Garden*.

The sowing and planting the various crops of kitchen vegetables is performed in Spring, in February, March, and April, for the principal supplies, and from that time, many sorts are also sowed and planted every month all Summer, till September or October, in smaller portions for successional crops; and some in Autumn to stand the Winter; and for earliest crops, several sorts are sowed and planted in hot-beds: all as explained under the different articles.

The kitchen ground will require digging, or trenching every year in Winter and Spring, and other times for every fresh crop, especially all vacant spaces, and for sowing seed; but sometimes planting may be performed between other crops without digging; likewise the ground will require occasional manuring every two or three years with rotten, or any other good dung that can be obtained, and this digged or trenched in only about a spade deep, within easy reach of the roots of the plants; observing generally in digging, or trenching in Winter, and early in Spring, &c. when not to be immediately sowed or planted, it is adviseable to lay the ground up roughly in ridges for the soil to pulverize and improve by the weather; then is easily and expeditiously levelled down for the reception of seeds and plants, and which also is a further improvement to the ground.

In a kitchen garden, where forward crops are required, it is proper to have garden frames and lights, some of one or two lights for small raising frames, and the principal supply are generally three-light frames; having also hand glasses in squares or bells, for early cauliflowers, and other purposes, with garden mats for

M

covering

covering the frames, &c. of cold nights, and bad weather, and for shade in Summer.

And of spades, rakes, hoes, should have two or three different sizes, large, middling, and small for different occasions; as also dibbles, garden lines, trowels, especially a scooped one, with dung fork, asparagus fork, and potatoe fork, &c. also wheel barrows, baskets, watering-pots, large and small sizes, sieve for sifting earth, and one or two common and pruning knives, nailing hammers, hatchet, hand-bill, &c.

As the kitchen garden plants consist of annuals, biennials, and perennials, it will be necessary just to mention that the annual plants are such as continue but one year at most, some but a few months or weeks, and require always to be raised from seed every year in Spring, and some in several crops, sowed every month in Spring, and Summer; biennial or two-year plants are such as remain only till the second year after sowing, then run to seed, and become useless; requiring to be always raised from seed every year, in Spring, Summer, &c. and perennial plants are such as are of several years continuance by the root, and produce annual crops, according to their different kinds, all of which is particularly explained under the respective heads of the various plants, and displaying also the several varieties of each, and their general uses, and proper culture, in the following order, alphabetically.

A S P A R A G U S.

DUTCH ASPARAGUS

BATTERSEA ASPARAGUS

GRAVESEND ASPARAGUS

LARGE READING ASPARAGUS

These are all one sort, not differing in their growth, only are raised in greater perfection in regard to size of the shoots, in different places, as above.

ASPARAGUS is a hardy perennial-rooted plant, always raised from seed sowed in the Spring, for planting out in the Spring following, when a year old, in

in four feet and half wide beds, a foot apart, and in three years after, will produce buds of proper size for gathering, and the same roots continue of several years duration, producing a crop of shoots annually in May, and June, &c. and in Winter, by planting in hot-beds.

The plants being always raised from seed, sow it in March, or beginning of April, in a bed of rich earth, broad-cast and rake it in evenly. The plants will soon come up; keep them clean from weeds all Summer; and next Spring, when one year old, transplant them where they are to remain; but not to be older than the second Spring before they are planted.

For planting asparagus, allot an open situation of good ground, very well dunged, several inches thick, and dig it in regularly a spade deep, then lay the ground out in four feet and half wide beds, with two foot alleys between, and to plant four rows of plants in each bed, a foot asunder.

The proper season for planting is March, and beginning of April, when the plants, consisting only of root, of many long fleshy fibres connected into a head at top, should be fork-digged up with full roots; then for planting, stretch a line lengthways, the first bed nine inches from the edge, and with a spade cut out a small trench or drill six inches deep, turning the earth to one side, plant a row of roots along the trench; close to the line side, uprightish, nine to twelve inches apart, with the crowns a little below the surface, drawing some earth to them as placed, and one row planted, cover them in, either with the earth in opening the next trench, or rake the earth of the first over them an equal depth; proceeding then to open another trench a foot from the first, plant it as above; and in the same manner plant four rows in each bed a foot distance, and rake the beds even, and line out the edges in neat order, allowing two feet for alleys.

This first year, as soon as the asparagus is planted, a thin crop of onions may be sowed on the beds, before they are raked; then rake in the seed. Both crops will

advance at the same time, without impeding the growth of one another.

The asparagus will come up slender the first year, larger the second, permitting the whole in both years to run up to stalks all Summer; the third year some will probably be large enough to begin gathering, but generally in good perfection the fourth year, to commence a general cutting of all the shoots, according as they advance in succession during the proper season, from the latter end of April, or beginning of May, to the end of June, or not later than the beginning of July, that the roots may not be too much exhausted for future production.

In their culture, keep the beds clean from weeds all Summer; and when the plants are of a proper age to produce buds or shoots of eligible size for cutting, continuing the gathering every year, till the middle or latter end of June, or beginning of July, as above observed; then permitting all the after-shoots to run to stalk till the end of October, when the stalks decaying, they are cut down, and the beds cleaned and landed up with earth from the alleys, to remain till the Spring, and then to be fork-digged and raked even.

Towards the end of October, or beginning of November, the stalks being decayed, or done growth, cut them down close. Hoe off all weeds from the beds into the alleys; then, by line and spade, chop out the alleys two feet wide. Dig each alley long-ways a moderate spade depth, and spread a good portion of the earth to each side, evenly over the beds, digging down the weeds as you advance into the bottom of the alleys;—the beds thus to remain till the Spring.

Then about the latter end of March, or beginning or towards the middle of April, before the buds begin to push below, fork-dig the beds with a light three-tined fork, going but a moderate depth to loosen the top earth, and not wound the crowns of the roots; and rake the surface even, drawing off the hard clods or rough earth into the alleys. The beds thus loosened, gives liberty for the buds to advance in a free growth, admits

admits the air, rains, sun, &c. and encourages the roots to produce the shoots of a handsome size for gathering.

The shoots or buds for gathering will sometimes begin to appear towards the latter end of April, but plentifully in May and June; and when they are from about two or three, to four, five, or six inches at most, above the surface, are proper for cutting, thrusting the knife down straight, close to each shoot, and cut them off a few inches within the ground, not to wound the successional buds advancing below; observing generally, in the first year's gathering, to cut principally only the larger shoots, for a fortnight, three weeks, or a month, then let the whole run to stalk: but in the succeeding years, gather the whole as they come, during the season of their perfection, May and June, two or three times a week.

In old asparagus beds, of a productive state for gathering, manuring with rotten dung will be of good advantage once in two or three years, applied in Autumn, when the stalks are cut down, forking it into the beds a small depth, adding some also into the alleys, which then dig, working the dung thereof into the bottom, and land up part of the earth over the beds as before directed.

To save asparagus seed for sowing, the shoots running to stalks in Autumn, produce plenty of seed in small red berries, ripening in October, when gather what may be wanted.

EARLY ASPARAGUS BY HOT-BEDS.

EARLY asparagus is obtained by planting three years old roots in hot beds, in Winter and Spring.

The plants for this purpose of forcing are raised and planted out as before directed, in beds in the natural ground, but need not be planted more than six to nine inches distance in the rows; and when of two or three years growth in the transplanted natural beds, they will be of a proper age and strength for the forcing business,

so as to produce shoots of a proper size; observing of which, as they should be planted very thick in hot-beds, or as close as they can be possibly crowded together, in order to yield a considerable produce to compensate sufficiently for the trouble and expence in forcing, should provide at the rate of from six to eight or nine hundred for a hot-bed, for a three-light garden frame, and in proportion for two or more such frames.

The hot-beds for this purpose are made any time from October or November, till March, or beginning of April, or every month during that period of time, to have a constant succession. Being provided with a good supply of fresh horse-stable dung, abounding in a good lively heat, and with which make the hot-bed in a defended situation, full to the sun, about a yard high in dung, for one or more garden frames, length-ways East and West: but without setting on the frames at first, directly earth the bed at top six or eight inches thick, for immediate planting, to have all advantage of the heat from the beginning; then, having the plants, mark out on the surface of the earth the width of the frames, which still continue off the bed, and beginning at one end, raise a small ridge of earth cross-ways, place the first roots upright against this, upon the surface of the level earth, or only the lower ends a little inserted, and as close together as possible, placing more against these in the same close manner, to the width of the intended frame, continuing placing others gathered as close as they can be crowded, till you have completely filled the bed, the crowns of the plants all an equal height; then directly bank up some moist earth round the outside roots, an inch or two above the crowns of them, and then earth over the crowns of the plants two inches thick; this done, observe that as the bed, in this its early state, will be very hot, it is advisable to keep off the frames till the heat is more moderate, especially in extensive beds, having two or three long sticks thrust down in different parts, to draw up daily, to try the temperature of the heat; and, while the bed is without the frames, if heavy rains or
snow

now fall, defend the top of the bed with long straw litter or mats, or set on the frame, and defend the bed with the glasses on the above occasion.

The plants, by the strong heat of the bed, will soon strike their roots down into the earth, &c. and the shoots begin to push above through the surface, when, prepare to add three or four inches more of earth over the crowns of the plants, and to set on the frames finally; or first make a large straw-band wreath, three or four inches thick, and, with some sharp-pointed sticks, a foot long, fix this round upon the top edge of the bed, and then, within this wreathing, apply the additional earth as above, having the whole five or six inches depth over the plants; and when the heat of the bed is moderate, set on the frames, resting the bottom upon the straw-band wreathing, and put on the glasses, and cover them of nights with mats or straw; and when the buds come up, admit air every mild day, by raising the upper ends of the glasses, or drawing them down one, two, or three inches: or in the Spring forcing, when more mild warm weather, give more air in proportion, or sometimes, in a fine sun-shining day, take the glasses entirely off for a few hours. Give also occasional gentle waterings.

Observe, if the bed, in a fortnight or three weeks, begins to decline considerably in heat, renew it by applying a lining of hot dung to the sides, eighteen inches wide, raising it by degrees as high as the dung of the bed.

In a month or five weeks after making and planting the bed, it will begin to produce shoots for gathering in considerable abundance, according to the thick or closely-placed deposit of the numerous roots; and when the shoots or buds are advanced above the earth, two to three or four inches, they are of a proper growth for gathering; in which observe, that, as they will come up very thickly all over the bed, and numerous buds advancing below the surface, in different stages of growth, perform the gatherings principally by breaking them off to the bottom, not cutting; thrust-

ing your finger and thumb strait down into the earth close by each shoot, giving a gentle twist, they will readily break off close to the root, without injuring the buds that are advancing below in regular succession, which will furnish a supply for gathering two or three times a week, for a fortnight, in good perfection, and about a week longer in an inferior degree in quantity and size; then will generally decline production, except in a few small stragglers not worth observation, and the plants then become useless for any future occasion.

That, as the same hot-bed will continue only about two or three weeks in production, if a constant regular succession is required, a new hot-bed should be made every three weeks or a month at farthest, and planted with a supply of entire fresh plants, as those which have been once forced produce no more.

A R T I C H O K E.

GLOBE ARTICHOKE (largest reddish heads)
OVAL, or GREEN FRENCH ARTICHOKE.

ARTICHOKES are hardy perennial plants, raised by young sucker-shoots from the root, continue several years, and produce their heads for use in July, August, till October or November. The globe artichoke is preferable to plant for the main crop.

They are propagated or raised by suckers or young shoots rising in the Spring, from the roots of old plants, proper to slip therefrom in March and April, when from five or six, to eight or ten inches high. Slipping them off close to the root, pull away some of the under, and any decayed or bruised leaves, prune the long tops of those remaining, and pare the bottom of the root; then, having an open compartment of good ground, well dunged and digged, plant the sets by dibble, in rows four feet and a half asunder, and two or three apart in each row, and give water if dry weather.

All Spring and Summer keep them clear from weeds, by hoeing the ground, which is all they require, till November,

November, &c. then to have a Winter dressing, by digging between and landing up over the roots, and a Spring dressing in March or April, to dig the ground level, and regulate the young shoots,—as hereafter explained.

They will produce some heads the same year, in August, September, and October; next year they will head sooner; and by planting some every year or two, the old and new plantations together furnish a production of heads from July and August, till November: observing in their production, that, as besides the main top head, several smaller arise in succession from the sides of the stems, and if required, to encourage the principal head to attain the largest size, most of these lateral ones, or side-suckers, should be detached in their young growth; which are also useful in the kitchen, and are saleable in the markets.

In November or December, before the frost sets in, cut down the large leaves to the small central ones; then dig the ground between and along each row, raising it gradually from both sides ridge-ways over the roots, and close about the plants, to defend them more effectually from the rigours of severe frost. Likewise, in very severe weather, cover with long litter round each plant.

And in the Spring, March or April, when the young shoots are advanced several inches in growth, dig the ground level, loosening it clear to the crown of the roots; and, where several shoots arise from the same stock, slip off the weakest, leaving three of the strongest outward suckers, and level in the ground between the plants.

Those slipped off, serve for young plants for new plantations, where required.

ARTICHOKE (JERUSALEM). See *Jerusalem Artichoke*.

ALEXANDERS.

ALEXANDERS are biennial, or two years plants, somewhat resembling celery, raised every year from seed, in Spring and Autumn, and when of advanced growth are earthed up to blanch them for use, in sallad, soups, &c.

Sow a crop in March and April, either in a bed, broad-cast and rake in the seed, and the plants transplanted in rows two feet apart; or sowed in drills that distance, to remain; and when the plants are well advanced in growth, earth them up with a hoe or spade, several inches on each side, and when thereby blanched white and tender, are proper for use in Summer and Autumn, &c.

Sow more about August, to stand the Winter, for Spring and early Summer supply.

The plants ripen seed in Autumn, then die; so save some seed to sow every year.

ANGELICA.

ANGELICA is a large biennial aromatic plant, raised always from seed for transplanting. Its young green tender stalks, in May, are in some families used for candying.

The plants delight in moist situations; but will grow in almost any soil and exposure.

Sow the seed in February or March, or in Autumn, about August, to come up earlier and strong the following Spring; sowing the seed in a bed or border, thinly, and raked in. and when the plants are three to four or five inches high, in Summer, transplant them a foot and a half or two feet apart, as they require a good scope of room for their large growth. The second year they will shoot with strong tall stems, which, and the stalks of the leaves, are occasionally used for candying to make angelica sweet-meat, they should
be

be cut when young and green in May or beginning of June.

The remaining stalks produce large umbels of seed, ripening in Autumn, which, and the leaves, &c. are used for medicine.

B A L M,

B A L M is a perennial plant, raised by slips of or parting the roots. The leaves and young tops are the useful parts, used principally as a family medicine for balm-tea, both when green, and when dried.

The plants are easily raised plentifully by side off-sets, or by dividing the roots in Spring or Autumn; or slips of the young Spring shoots taken off with roots, in March or April, and may all be planted in any beds or borders of common earth, a foot apart. They will soon grow freely, and encrease into large bunches, and produce green leaves for use most part of the year, but in full growth in Spring and Summer, from April till August or September. observing in Summer, when the plants shoot up to stalks, it is proper, in June or July, to gather a quantity to dry for Winter, cutting the stalks, with the leaves thereon, close to or near the bottom; spread in a shady place to dry at leisure, then tied in bunches and housed.

The same plants continue several years by the roots. Keep them clean from weeds all Summer; dig between them in Autumn or Spring, with a small spade or trowel; they will produce plentiful supplies of leaves and shoots annually.

Where young balm is required all Summer, cut down some every month, and fresh shoots will succeed them from the bottom.

B A S I L.

LARGE BASIL (several varieties)

LEAST, or BUSH-BASIL (several varieties)

B O T H those species of Basil are tender annual plants, aromatic, pot, and salad herbs, and for medicine;

medicine ; all raised from seed in the Spring for use in that season, Summer, and Autumn, the leaves and young tops are the useful parts.

They are raised by sowing the seed in March and April in a moderate hot bed, the earliest sowing, the others may be in a warm border of light dry rich earth, the middle of April and in May ; both, some to remain where sowed to gather young ; and the rest transplanted in May and June into beds of rich earth a foot or fifteen inches apart : and watered ; they will advance in growth proper to gather for use, as wanted in Summer and Autumn,

As the plants last but one Summer, always save some seed when it ripens in Autumn, or procure some for sowing every Spring.

B E A N S.

Early small Mazagan
Early small Lisbon
Early small Spanish
Early Long-pod
Common Long-pod
Sword Long pod
Broad Spanish

White Blossom
Green Nonpareil
Mumford
Windfor Broad Bean
Toker Broad Bean
Sandwich Broad Bean
Dwarf Cluster

BE A N S are all annual plants, raised every year from seed, (the beans,) planted in several crops from October or November, every month till June or July, for early, general, and late production, very profitable crops for family supply, and market, in June, July, August, and September,

Of the different kinds the early small sorts are esteemed for their early production for small crops ; the long pods are of larger size, great bearers, and tolerably good for eating while quite young ; but the broad beans are superior to all for goodness of eating, as also the white blossom, which is a singularly fine eating bean, of the smaller kind.

For

For the early crops plant some mazagans in October, November, or December, in a warm border, under a south wall or hedge, &c. in rows two feet and a half asunder, one or two inches deep, and two or three inches apart in the rows; or some may be sowed in a single drill close to the wall; or likewise a quantity may be sowed thick in a bed for transplanting towards the spring, covering them in severe weather, to preserve them as substitutes in case those in the open ground should be killed by the frost, and when an inch or two high, in January or February, in mild weather transplant them into a south border, or if the frost kills the early plants, or that it was omitted planting an early crop, a quantity may be sowed thick in a hot-bed, or in large pots therein, in January or February, to raise some plants quickly for transplanting as above, and thus the transplanted beans in either method, will generally come into production for gathering some days or a week before the others: and to succeed the mazagans, may plant some early Lisbons, small Spanish, or early long pods, in the open ground, in November or December, &c. and according as the young plants of the different sorts advance two or three inches high, hoe up a little earth to the stems, and when they come into blossom, pinch or cut off the tops of the stalks to encourage the pods to set sooner, more abundant, and come in earlier, for gathering in May and June.

More of the same sorts may be planted in December and January, in larger supplies in more open exposures, for successional crops in June.

But for the main crops of beans, the larger sorts are commonly planted, such as the long pods, broad Spanish, toker, Sandwich and Windsor, and of which may plant some common and sword long pods, broad Spanish, toker, &c. in November, December, January, &c. in rows a yard asunder, and some Windsors and Sandwich beans may be planted in January and February in open mild weather; but the principal season for planting the main crops, is February, March, and April, and for late crops, may plant in May and June, all of which
plant

plant in rows a yard distance, or the Windforts three feet and a half; generally either plant them by dibble, thick blunt-ended, to make a wide hole to admit the beans clean to the bottom, inserting them two to three inches deep, and three to four inches asunder in the rows, or may draw drills in which to plant them, the above depth and distance,—these sorts in the early, general, and late planted crops, will produce in succession from June, July and August, till the middle of September.

Likewise plant some white blossom beans, both in the general and late planting seasons, from February or March, till June or July: it is a great bearer, and a most excellent tender, and sweet eating bean, planted in rows as above, two feet and a half, or a yard asunder.

Any of the other beans may also be planted in smaller portions to encrease the variety.

For late beans, may plant some of the smaller sorts again, as the mazagans, small Spanish, long pods, also a larger portion of the white blossom beans, in June and July, to produce in September, or sometimes till October, especially the last mentioned kind.

According as the beans of the different crops come up, and are advanced two, to three or four, five, or six inches high, hoe some earth to the stems on both sides of the rows, cutting down all weeds, repeating the hoeings as weeds advance to keep the plants clean, and to loosen the earth to encourage their growth.

When the different crops come into full blossom, pinch or cut off the tops to encourage a more plentiful production of pods well filled, and sooner fit to gather.

In planting late beans in June, and July, if dry hot weather, it is proper, before planting, to soak them several hours in river or pond water, that, when planted, they may come up more freely and regular together.

The

The gathering of beans should be performed while the pods or beans therein remain moderately young, or before they become black-eyed.

To save beans for seed, either plant some of the different sorts required in February, or March, or leave some rows of the different crops ungathered; they will ripen in August, the pods become brown, and the beans therein dry and hard, then pull up the stalks placed in the sun to harden the beans thoroughly, then beat, or thresh out each sort separate.

B E E T (RED-ROOTED)

COMMON LONG RED-ROOTED
TURNEP-ROOTED, (Root roundish oblong)
MANZEL-WURZEL or GERMAN BEET

THE Red Beets, valued for their large red roots, are biennial plants, raised every year from seed in the Spring, remain where sowed, and thinned ten or twelve inches distance, attain full growth for use in Autumn, all Winter, and following Spring.

They being raised from seed every year, is sowed the latter-end of February, or any time in March, or beginning of April at latest, allotting an open situation, and light rich ground; sow the seed either broad-cast on the rough surface, and rake it well into the ground, or as being a large seed, sow it in drills an inch deep, the drills a foot asunder, raking the earth evenly over the seed; or it may be dotted in with a thick blunt ended dibble in rows ten or twelve inches apart, making the holes the same distance, and an inch deep, dropping two or three seeds in each hole; but of which to leave only one good plant.

When the plants are come up with leaves an inch or two broad, they must be thinned and cleared from weeds, performed either by hand, or small hoeing, thinning out the superabundant plants, eight, or nine, to ten or twelve inches distance, eradicating all weeds;
and

and of the plants raised from the seed dotted in, pull out the weakest, and leave only one good plant in each patch.

The plants will attain a large growth in the roots, to begin taking up some for use in September; but will be of full size in October, when, or November, when, the leaves decay, dig up a quantity, cut off the leaves and deposite the roots in sand, under cover, ready for Winter supply, or some may be digged up, and trenched in close together in dry earth, and covered in frosty weather with long litter.

The roots will remain good till April, or May following; they are used to slice raw and boiled in sallads, also for pickling, and boiling, to eat cold with vinegar, &c.

Likewise the Mangel-wurzel beet is useful both in its root to boil, and the leaves for dressing like Spinach, in which they are excellently good; cutting them off close as wanted, they will shoot up again in successional supply; also the thick fleshy stalks, and middle rib of the leaves peeled, boil tender and good, to eat like asparagus.—See the *Pot Herb Beets*.

To save seed, leave or plant out some best roots in February two feet distance, they will shoot up strong stalks, and produce plenty of seed in Autumn.

B E E T S.

(Pot-herb kinds for their leaves)

GREEN-LEAVED BEET

WHITE-LEAVED BEET

GREAT WHITE SWISS BEET

MANGEL-WURZEL BEET

THIS class of Beets are cultivated for their large leaves to boil like spinach, and for soups, and other culinary occasions; are all biennial plants, raised every year from seed sowed in Spring, Summer, and Autumn,

Autumn, to remain where sowed, and the plants thinned.

Sow the seed in any bed, border, or open situation, in February, March, or April, to produce leaves for use in Summer, &c. and some in July and August, to stand for Winter and next Spring; sowing either broad-cast on the surface, and rake in the seed, or in drills six, or eight, to ten, or twelve inches distance, especially the white beets and the mangel-wurzel, in which the leaves are of largest spreading growth; and when the plants are come up, with leaves an inch or two broad, thin and clear them from weeds, leaving the plants six or eight inches apart, the green sort, the others ten or twelve, and at which distances the plants will grow large and strong, with large thick succulent leaves.

The leaves are good to boil like spinach, and other small greens, also to put in soups, and for stewing, &c. and likewise in the white beet, and mangel-wurzel, the large thick fleshy middle rib of the leaves, being divested of the leafy part, is peeled, tied in small bunches, boiled, and eaten like asparagus, with melted butter, very tender and good.

By sowing in Spring, and Autumn, the plants furnish a supply of leaves all the year, in successional production from the same plants, gathering the larger leaves as wanted, the others will advance in proper growth.

Save seed by leaving some old plants in the Spring, they will shoot in Summer, and ripen seed in Autumn.

BORECOLE.

GREEN CURLED BORECOLE

RED CURLED BORECOLE

SCOTCH CURLED BORECOLE

ANJOU CABBAGE, OR TALLEST BORE-
COLE

MILAN BORECOLE

BRUSSELS SPROUTS.

THE Borecoles are all hardy greens of the cabbage tribe; but not cabbaging, the heads remaining open and

and loose, growing with tall upright stems, two, or three, to four, or five feet high, crowned by a large open head of fimbriated curled leaves, most hardy to stand the Winter, are mostly biennial plants, all raised from seed every year in the Spring, planted out in Summer and Autumn, come in for use from September, or October, till February, gathering the heads for open colewort greens, which boil exceedingly green and tender, and the stems remaining produce many fine side sprouts.

But of the different kinds, the first two sorts, and the Scotch borecole are preferable for the main crops, and deserve culture in every kitchen garden for their singular hardiness to stand the Winter, and being excellent boiling greens in that season; the anjou sort grows very large, and not so good to boil; the Brussels sprouts are of a perennial nature in the root, producing many sprouts most times of the year.

They are all raised from seed, sowed in the Spring in two or three crops, from March till May; all for transplanting in Summer, &c. sow the seed, each sort separate, in open beds of common earth, and raked in regularly, when the plants are come up with leaves an inch or two broad, thin out some from the seed beds, and prick them in others in an open situation, four inches distance, and watered; and in which to have four or five weeks growth, when, and those in the seed beds being thinned, they will all be of good strength for final transplanting, which perform at different times, from May, or June, till August, or September, taking opportunity of rain, and allotting them an open compartment of ground; transplant them two feet and a half, or a yard asunder, the first planting in Summer, the others in July and August, two feet and a half to two feet will be sufficient, and the late crop planted in September to stand till Spring, a foot and a half, or two feet at most is room enough; observing, if dry weather, to water them occasionally till they take root, and begin to grow.

In

In their advancing growth, the only culture they require is, to hoe the ground, to cut down approaching weeds, and to hoe some earth round the bottom of the stems of the borecole once or twice, to encourage and strengthen their growth that they may advance with strong tall stems productive of large top heads, and a plentiful after supply of side sprouts in the Spring.

The forward crop of the Summer planting will produce heads of large size for cutting in September, and October, the others in Winter, and Spring following.

To save seed, leave some best sorts in February, or taken up in Autumn, or Winter, and trenched down to their tops; they will shoot to stalks, and produce seed in Autumn.

B O R A G E.

COMMON OFFICINAL BORAGE.

BORAGE is a hardy annual plant, raised every year from seed, sowed in Spring, and Autumn, to remain where sowed and thinned; and comes in for use most times of the year, the young leaves and tops for sallads and culinary purposes, and the flowers and young tops to put in wine cool-tankards, in Summer, and Autumn.

The plants are always raised from seed, sowed in any bed, border, or open situation, in March or April, for Summer supply, and in any of the Summer months for young Autumn borage, as the early plants soon run to stalks, and seed the same year; and sow some in August to stand in a young growth for Winter, and early Spring use, sowing the seed either broad-cast, and raked in, or in small drills six inches to a foot asunder, and when the plants are up an inch or two in growth, thin them that distance, or some left closer to thin out young for use; or a quantity in young growth may be transplanted a foot apart, in Spring and Summer,

Summer, leaving in either method a parcel for shooting up to stalks, in which they will also produce successional supplies of young tops, leaves, and flowers, in Summer and Autumn, till November.

Save seed ripening in Autumn, for sowing the following year, or from scattered or self-sowed seeds of the run plants, many young ones will rise naturally.

BROCCOLI.

EARLY PURPLE HEADED

LARGE PURPLE

DWARF PURPLE

BRANCHING

GREEN

BROWN

WHITE, or CAULIFLOWER BROCCOLI
(heads similar to a Cauliflower)

ALL the varieties of Broccoli are annual, or at most biennial plants, raised every year from seed in Spring and Summer, for transplanting in Summer and Autumn, producing central heads for use, in Autumn, Winter, and Spring; are all of the cabbage family, not cabbaging, but in the centre of the head of leaves produces a compact clustery seedy-like head in the manner of a cauliflower, composed of the advancing flower stalks and buds, that boils most excellently tender, sweet, and good.

The bioccoli are desirable plants to cultivate for a principal crop; all the sorts are good, and may be easily raised in every kitchen garden; the season of their perfection is October, November, and December, &c. for the Autumn and Winter crop; but rather superior in size, in Spring, from February till May.

They are all raised from seed, sowed every year in March, April, and May; but principally the two last mentioned months for the main crops; or may sow a smaller portion in March for an early Autumn crop.

Heading

heading in September, &c. a larger sowing in April for the principal Autumn crop, in October and November; and sow a good crop in May to head in Winter, and for the main Spring production; and may also sow in the beginning of June, to come in for late Spring broccoli; all for transplanting three, to two feet and a half, and two feet asunder, in rich good ground.

Sow the seed of each sort separate, in an open compartment of rich ground, in four feet wide beds, broadcast, and rake it in evenly.

When the plants are up, having leaves an inch, or inch and half broad, thin out a quantity from the seed bed, prick them in other beds four inches apart, and watered, remaining in these beds a month to gain good strength for final transplanting, and those in the seed beds being thinned by pricking out the above, will also attain proper strength for planting out where they are to remain.

According as the plants of the different sowings attain proper size and strength, having several leaves, two or three inches broad, or more; proceed to plant them out finally at different times, from May, or June, till September; but plant the principal crops in June, July, and August, allow them an open compartment of the best ground, and enriched with dung, as in a rich and good soil, or that of a loamy nature, they will grow strong, and produce large heads; observing generally for planting, take opportunity of rain, if possible, drawing a quantity of the strongest plants from the beds, and plant them a yard, or two feet and half distance, the main crops, the others late planted, two feet will be sufficient distance, give water at planting, especially if dry weather, and repeat it two or three times till they take good root, and begin to advance in growth.

In their transplanted growth, keep the plants clean from weeds by hoeing between them occasionally; and hoe some earth round the lower part of the stems to encourage them in a free and strong growth to produce large full heads.

Some

Some of the earliest planted crops will begin to produce heads in September, and October, and be succeeded by the others in November, December, &c. and the rest in the Spring; the heads advance in the centre of the leaves in a close firm cluster; and should be gathered for use while they remain moderately close, cutting them with about six inches of the stem, and some of the small surrounding inner leaves, pare off the outer rind of the stems, are then ready for boiling; generally in the purple, green, and brown broccoli, the stems produce secondary crops of sprouts, but in the white or cauliflower broccoli seldom any—these sprouts gathered with the leaves boil exceedingly green and tender.

To save seed for sowing, leave some best kinds of the Spring-heading plants, they will shoot up stalks in Summer and produce ripe seed in July or August.

B U R N E T.

COMMON GARDEN BURNET.

BURNET is a hardy perennial plant, growing with a low tuft of small pinnated leaves, green all the year, are of a warm relish, and are used for sallads, and some culinary occasions: the plants raised from seed, for transplanting, and by parting the roots, which continue of several years duration, furnishing leaves Summer and Winter.

As this plant is raised both by seed occasionally, and by parting the roots, each method is as follows:—to raise a crop by seed, sow it in March, or April, in a border of light earth, and when the plants are of two or three inches growth in Summer, transplant them into a shady border, a small crop, setting the plants a foot asunder, they will continue several years, and encrease by the root into large bunches; and to raise a supply by parting the roots, perform it in the Spring, or Autumn, or almost in any season, when wanted, either

either taking off some side slips, or large roots divided into several sets, and plant them a foot apart, they will soon grow, and encrease considerably; a small bed or two is sufficient for the supply of a family.

As the plants shoot up to stalks in Summer, it is proper to cut some of them down to promote a production of young leaves below, all that season, and Autumn.

C A B B A G E S.

Early small Dwarf Cabbage	Large oblong Hollow
Early small Sugar-loaf	Large late long Hollow
Early large Sugar-loaf	Large drum flat headed
Early Yorkshire	Large round Winter Cabbage
Early Battersea	Large round Scotch (<i>very large</i>)
Early London Hollow	Large American (<i>very large</i>)
Early Dutch	Red Dutch Cabbage.
Early Russia	
Common large round	
Large hollow Sugar-loaf	

All these are heading cabbages, though for general culture, about four, five, or six of the principal sorts may be sufficient.

CABBAGES are all biennial plants, raised every year from seed, sowed two or three times in Autumn, Spring, and Summer, for early and principal crops, &c. all for transplanting, one, to two or three feet distance, to cut for small, middling, and full-grown cabbages; also in their young open growth for cabbage coleworts; in all of which are most useful and profitable to cultivate for principal crops at most seasons of the year; but in their cabbaged growth are in greatest perfection from May or June, till November or December, and as colewort, they are most valuable Autumn, Winter, and Spring crops for young open greens, or with small loose hearts.

To

To cultivate crops of heading cabbages, it is proper to have both some of the early sorts, and a larger portion of the middling sizes, and large late kinds; such as for the earliest crops, have some of the early dwarf, or sugar-loaf kinds, for cabbaging in April, May, and June, a larger supply of the Yorkshire, or Battersea, and large sugar-loaf, &c. for main crops of Summer cabbages; and good crops of the large round, and oblong hollow kinds, &c. for late Autumn, and Winter crops; and a portion of red cabbage for Autumn, Winter, and Spring use, both for pickling, and to shred to eat raw with vinegar, oil, &c. as a Winter, and Spring sallad, as this sort is improper for boiling, like the other sorts of cabbages; and for which several crops the seed is sowed at different seasons, as in Autumn, the beginning or middle of August to stand the Winter, in young plants to come in for early and main crops of cabbages next Summer and Autumn; and a Spring sowing in February, March, or April, to plant out for successional Summer, and Autumn cabbages, and may also sow in Summer, May, June, July, of the smaller quick headed kinds, as the Yorkshire, Battersea, large sugar-loaf, London Hollow, or Russia, for light young cabbages the latter-end of Summer and Autumn, and part of Winter, till November, or December.

For the early and main Summer and Autumn crops, generally sow in August, of the sorts above mentioned, and red cabbages, &c. all for planting out some the beginning of Winter; but the principal supply to stand till the Spring for final transplanting, observing of the time of sowing this crop the first, or rather second week in August is the proper period; for if sowed sooner, the plants will be apt to run in the Spring in their young growth.

Sow the seed each sort separate in an open situation, in beds of rich mellow earth, broad cast, and raked in evenly; and watered, if dry weather.

When the plants are up with leaves an inch or two broad, in September, thin out a good quantity of the best from the seed beds, prick them in others four inches apart,

apart, and watered; prick out more in a week or fortnight after, and in which beds they will acquire good strength before Winter, and those remaining in the seed beds will also have room to advance in a proper growth, all for transplanting, both those pricked out, and the remaining seed-bed plants, some the same year of the early kinds, about October, November, or December, for earliest cabbaging; but the principal supply to remain in the beds for Spring planting, in February, March, and April, for the main Summer crops; allot them good ground in a free situation, and if dunged, it will be of much advantage, and in October, November, &c. aforesaid, plant out some early sorts in rows a foot and half to two or three feet distance, by one or two feet in the rows, to admit of thinning for use in their young cabbaged state, as occasionally wanted; the others remaining in the beds all Winter, begin planting out the strongest in February, and all the rest in March and April, the smaller kinds plant eighteen inches, or two feet asunder, or some closer, to allow for thinning in their early young growth with small loose heads; but those of larger, or middling size for a main crop, plant two feet, or two and a half distance, and the large Autumnal cabbages, and red cabbage plant a yard asunder every way, as being of large spreading growth.

After being finally transplanted, observe if any are killed, or greatly damaged by the weather, or eat by slugs, grubs, &c. or any run to seed, pull them up, and supply the deficiencies with fresh plants; and in their advancing growth, keep them clear from weeds by occasional hoeing, loosening the ground about the plants, and hoe some earth up round the stems, and in the early cabbages, if required to have them head as soon as possible, they may be forwarded by tying the leaves together moderately close with small osier twigs, or strings of fresh bafs.

For successional young Summer cabbages, and Autumn and Winter crops; sow different sorts in the Spring, about February, March, or beginning of
N April,

April, such as the large sugar-loafs, Yorkshire, Battersea, &c. to succeed the early, and general crops of Autumnal raised plants; and sow a good crop of any of the large round oblong hollow cabbages, and red cabbage for late Autumn and Winter supply, and the red cabbage also for Spring; observing the same methods of sowing, pricking out, as before directed, and transplant them finally in April, May, and June, &c. the distances before explained.

And for late young Summer, and Autumn cabbages, smaller portions may be sowed any time, from April, or May, till July, principally of the quick hearting sorts, as the sugar-loafs, Yorkshire, &c. before-mentioned, to plant out in Summer and Autumn, to produce young heads in September, October, November, &c.

Observe of the large late round and oblong cabbages, and red cabbage, sow only two principal crops, viz. in August, and February, or March.

The stalks of Summer and Autumn cabbages remaining after gathering the head, produce crops of fine green tender sprouts.

For cabbage coleworts to use as young open greens, any of the early or quick headed kinds are proper, and may be sowed in June and July to plant out for Autumn and Winter crops, and in August for Spring coleworts, to stand in that season without running, and what are not then used for coleworts will advance to cabbages; all which crops of cabbage coleworts plant out at different times, from July, or August, till October or November, in rows a foot apart, by six inches in each row.

To save cabbage seed, select some plants of full cabbaged growth of the approved sorts, in October, November, December, or early in the Spring, if any remain, dig them up with full roots, pull off the large leaves, and trench them down to the heads in dry ground two feet apart; they will shoot up to stalks, and produce plenty of ripe seed in July, or August.

Or

Or cabbage stalks furnished with good sprouts, will also be eligible to produce seed.

CAPSICUM.

Long-podded	Heart-podded
Short-podded	Pendulous-podded
Bell-podded, or Bell-pepper	Erect-podded
Angular-podded	Red-podded
	Yellow-podded

CAPSICUMS are tender annual plants, raised every year from seed in a hot-bed in the Spring, for planting out in May, its green and ripe seed-pods, the parts used, and to pickle, preserve, &c. to use as spices of the hottest quality on particular occasions.

Sow the seed in March, or April, in a moderate hot-bed under frames and lights, or hand-glasses; and when the plants are up, give air, and occasional light waterings, and when two or three inches high, prick some in a new hot-bed, or forward them; or in want of this, in a bed of natural earth the end of April, or beginning of May, defended with a frame and glasses, or in cold nights, or bad weather with garden mats; water them, and give shade from the mid-day sun till they take root; giving also frequent waterings in their advancing growth till the middle or latter end of May, or beginning of June, in warm weather, then transplant them into the full ground fifteen or eighteen inches apart, and watered.

They will grow bushy, flower, and produce pods in July, August, and September, to gather green and ripe, as wanted.

The ripe pods produce plenty of seed in Autumn.

C A R R O T.

ORANGE, or COMMON LARGE CARROT
 EARLY HORN CARROT
 YELLOW CARROT.

CARROTS are hardy biennial plants, raised every year from seed in the Spring, &c. most valuable roots to cultivate for principal crops for use great part of the year; young in Spring and Summer, and in large growth in Autumn, from July and August, till October, when they attain full size, and continue good till the following Spring.

They require a light deep soil, and open situation; they grow fine and large in a light sandy loam.

For early young carrots, sow some seed of the early horn kind in January, or February, in a warm border; or in a moderate hot-bed under a frame of glasses, or in want of these, the bed arched over with hoops or rods, and cover with mats in cold nights, frosts, and bad weather; they will come in for drawing young, of a small size, in April, or May, especially those in hot-beds.

The main crops, the orange or common carrot is proper; which sow in the latter end of February, or in March, but not later than the beginning or middle of April, the ground digged two spades, or one full spade deep, well breaking all lumpy parts; and may then either be laid out in four or five feet wide beds, or remain in a continued plat; sow the seed thinly, and regular, and rake it in evenly; or if very dry light ground, may first tread down the seed, and then rake it in, and when the plants are up two or three inches, in May, or June, they should be thinned and cleared from weeds, either by hand or small hoeing thinning them four or five inches distance, those designed for drawing for use in Summer, in a young or moderate growth; but the main crops that are intended to grow
 to

to full size, should be thinned six or eight inches; pulling, or cutting up all weeds; some will be of a proper size for drawing young in June, and July, in a thinning order, and will be advanced to a good sizeable growth in August, and September, when may either continue drawing the largest, or dig them clean up as wanted; but observing to leave a principal supply to continue growing till the end of October, to attain full growth and largest size, and at which time, or in November, when the leaves decay, dig up the whole, or a principal part, cut off the tops close, then deposit the roots in layers of dry sand, under cover, where they will keep sound and good for Winter and Spring service.

If required to have a supply of young carrots continued in succession all Summer, and Autumn, sow a small crop in April, and May; and in July, for young Autumnal and Winter carrots.

And for young carrots to draw early in Spring, sow some seed in the beginning, or middle of August to stand over the Winter, they will be fit for drawing in March, and April; but will soon become hard and tasteless.

To save carrot seed, have some largest fine roots in October, November, or February, planted two feet apart, inserted over their crowns, they will shoot, and produce seed in Autumn.

C A U L I F L O W E R.

EARLY CAULIFLOWER.

LARGE LATE CAULIFLOWER.

CAULIFLOWERS are tenderish annual plants of the cabbage family, always raised from seed in two or three crops every year; plants of great estimation for their large white heads produced in the midst of the leaves, obtained in perfection in May, June, July and August, or till October and November, by different sowings; the first in August, to stand the

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Winter,

Winter, in a young growth, under hand-glasses, frames, and in warm borders, and a successional sowing in the Spring, March, April and May: all for transplanting, three to two feet and a half asunder.

For early and first general crops, sow in August to stand the Winter, in young plants. Perform the sowing about the 18th or 20th, to the 24th of the month, or two smaller sowings in that time, at three or four days interval, in a bed of rich light earth. Shade and water the bed, if dry weather; and when the plants are up with leaves an inch or inch and half broad, in September, prick them in beds three or four inches apart: give water, and shade them from the sun till they have taken root; to remain in this bed, to gain strength, till October.

Then, about the middle or end of that month (October) plant out a quantity, finally to remain, in rich, well-dunged ground, under hand-glasses, these placed in rows four feet asunder, and three feet in the row, planting four or five plants under the middle of each glass, four or five inches apart, but of which only two are to remain under a glass in the Spring. Give a light watering at planting, put on the glasses close till the plants take root, then raised on one side one or two inches in the mild days to admit air; the glasses to be continued all Winter, but, in all mild open weather, tilt up the South side on props two or three inches high, as above observed, to admit the free air, that the plants may not draw on too fast; or sometimes, in all fine mild dry days, set the glasses off, but put on every night, and always shut down close in frosty, cold, and bad weather, and tilted up when temperate. And thus continue the glasses till the middle or end of April: but observe, in the latter end of February, or in March, if more than two plants remain under each glass, all above that number should be removed, leaving the strongest; and those thinned out, plant in the open ground, two feet and a half distance, drawing a little earth about those remaining. Place the glasses over them, as above; but when the plants are considerably

derably advanced, raise each glass upon three props, three or four inches high, to give good room for a free growth: thus they will come in for the earliest crops, and produce flower-heads in May and June.

The other cauliflower plants, not planted under hand-glasses in October, or where there is not the convenience of these, should at that time, end of October or beginning of November, be transplanted into frames, four by three inches distance, to have shelter all Winter: give water at planting, put on the glasses close till they take root, then propped up two or three inches behind, or drawn off to the back of the frame every mild dry day, but put on of cold nights, and when rain, snow, frost, &c. and when severe frosty weather, cover the glasses or frames with straw-litter or mats; giving the full air in all mild weather, till the end of February, March, or beginning of April. Then transplant the whole into the full ground, two feet and a half distance, and watered:—they will succeed the hand-glass plants, in producing large heads in July and August; or, in want of sufficient frame-room for Winter protection of the young cauliflower plants, as above, they may be pricked, some in a warm border in October, close to the wall or hedge, &c. three inches apart; or some in a bed arched over with hoops, to cover with mats of nights, great rains, snow and frosts, during the Winter; and in March, &c. transplanted as the others, will head in succession to the frame plants.

For succession late Summer crops, or if none were raised in Autumn to stand the Winter, sow in February or March, in a hot-bed, or warm border; the young plants with leaves an inch broad, prick into other beds of the same nature, three inches apart, to gain strength in three or four weeks growth; then transplanted, the latter end of April, or in May, &c. will produce good heads in July or August, though generally inferior to the foregoing.

Or may also sow in April, to plant out in June for late production of small heads.

And for late Autumn and Winter cauliflowers, sow some towards the 20th or 24th of May, in beds of light earth, in an open situation: the young plants pricked out in June, to grow strong till the middle of July, then transplanted in showery weather, two feet and half asunder, to remain for producing heads in October, November, and December.

According as the different crops of cauliflowers, in their final transplanted state, advance in their Spring and Summer's growth, the necessary culture is to hoe the ground occasionally to keep downwards, and to loosen the earth, and draw some round the stems of the plants, to forward and strengthen their growth; and in the early and principal crops, if very dry hot weather, in May and June, &c. when advanced to a good size, give one or two good waterings to the roots, to encourage their producing large heads; and, according as the heads appear, turn down some of the large leaves to defend them from the sun, rain, &c. to preserve them white and close.

To save seed, leave some of the finest headed plants of the early and main crops, in May, or June, or July. They will shoot up to stalks, and produce ripe seed in September.

C E L E R Y.

COMMON UPRIGHT CELERY.

LARGE UPRIGHT CELERY.

SOLID-STALKED CELERY.

CELERIAC, or TURNEP-ROOTED CELERY.

CELERY is a hardy annual plant, or at most biennial, raised from seed every year, in Spring, &c. for planting into trenches for earthing up, to blanch or whiten the stalks of the leaves, the eatable parts, both for eating raw in fallads, and to put in soups, and for stewing, &c. obtained in Summer, Autumn, and all

all Winter and Spring, by different sowings and transplantings.

Of the four varieties of celery, the first three are cultivated for the stalks of their leaves ; but of which, the common upright celery is best for the main crops, and hardiest for Winter : the celeriac for its turnep-like root.

For earliest Summer and Autumn celery, sow a moderate crop, end of February or in March, in a warm border, or in a hot-bed, to bring the plants forwarder ; and when they are two inches high, prick out some in another bed, two or three inches apart, to have a month's growth, or till advanced five or six inches, then transplanted in May or June, &c. into trenches, for blanching, as directed below in the culture of the main crops ; and when they are advanced in the trenches ten or twelve inches high, begin to earth them up, drawing some earth to both sides with a hoe, &c. repeating it as they grow higher, till whitened six or eight, ~~to~~ ten or twelve inches ; then may begin to dig them up for use. As these early sowed plants will not generally continue long in full growth, before they pipe or run, so only a small or moderate crop should be raised, principally for a present early supply.

For the main crops in Autumn and Winter, sow a good portion the latter end of March, and in April and May, in beds of rich earth, and rake in the seed. When the plants are up, give frequent waterings in dry weather, and when two or three, to about four inches high, prick out a quantity from the seed-beds at different times, into other beds, three or four inches apart, and watered ; and after having four to five or six weeks growth, advanced six or eight, to ten or twelve inches, they should be planted out in trenches.

Mark out the trenches a foot wide, and a yard or three feet and a half asunder. Dig out each trench a moderate space deep, spreading the earth evenly in the intervals, and dig the bottom of the trenches ; or, if poor ground, first lay in two or three inches depth of rotten dung, and dig it in the bottom ; then draw up

the plants, prune off the long tops of the leaves and ends of the roots; plant a row along the bottom of each trench, four or five inches apart, water them at planting, and in dry weather till they take root; continue thus planting out a portion once a fortnight, or three weeks, or at least every month in June, July, August, and September.

According as the plants in the trenches advance in height ten, twelve to fifteen inches, they should be earthed up to blanch; performing the first earthing with an hoe, drawing in the earth to both sides of the plants three, four, to five or six inches, repeating the landing up once a week, or fortnight, generally with a spade when the plants are more advanced; breaking the earth small, and earth them up at different times, till landed fifteen to eighteen inches, or two feet, to whiten them of some considerable length; continuing the earthing up in the different crops, till October, November, or December, at which time earth them up near the tops, both to blanch them a good length, and to protect them more effectually from frost; and thus the plants of the different transplantings will be fully blanched to dig up for use, as wanted, from July, or August, to September, October, and all Winter.

But for Spring celery, to stand late in that season without running, it is proper to sow a small crop in May and June, the young plants pricked in beds, in rows, six inches by three distance, to remain till September, October, &c. then transplanted into moderate trenches, and earthed a little in Winter; and as they advance in growth in Spring, in February, and March, give the final earthing, they will continue good till May without piping or shooting for seed.

In taking up full-grown celery for use, begin at one end of the rows, dig away the earth clean down to the roots, which then loosen with the spade, that the plants may be readily drawn up without breaking the stalks, — of which all the blanched or whitened parts are good for the several uses required, also the fleshy part of the roots.

The

The celeriac, or turnep-rooted celery, different from the others in being of a lower or dwarfish spreading growth, with a large fleshy root, swelling like a turnep, is cultivated principally for that part, and is raised from seed as the other sorts; sow the seed in March, April, and May, in beds of rich earth; some pricked in beds for a month, then the whole transplanted finally in June, July, August, &c. not in deep trenches, as in the upright celery; but dig the ground, then with the corner of an hoe, draw drills two or three inches deep, and two feet asunder; plant a row of the celeriac in each, five or six inches apart, and watered; and when of advanced growth, add the root swelled large, hoe up some earth thereto on both sides of the row to blanch them white and tender; then may be used for the same purposes as the other celery, or to slice to eat with vinegar, &c.

To save celery seed, either leave in the Spring some rows of good plants the least blanched, or in February dig up some, cut down the tops of the leaves, and plant them in rows two feet distance; they will shoot, and produce abundance of seed in Autumn.

C A R D O O N.

THE Cardoon is a large biennial plant of the family of the artichoke, and of similar growth; but different for use, the blanched stalks of its large leaves are the parts used for stewing, soups, sallads, &c. in Autumn, and Winter; is always raised from seed every year in the Spring for transplanting in Summer, in order for earthing up a considerable height to whiten, and render the stalks tender, and mild flavored.

This plant is of large upright growth, three to four, or five feet high, is but in small request, only in some particular families.

It being raised annually from seed, sow it in March or April in small portions, in a bed of common earth, moderately thin, and rake it evenly into the ground; when the plants are up, thin them three or four inches distance.

distance to have room to obtain proper strength for transplanting, which should be performed in May or June, when they are eight, or ten inches to a foot high; allot an open compartment of ground, taking opportunity of rain falling, draw up the plants, prune the long straggling tops of the leaves, and plant them by dibble, either in the level ground, or the place for each plant hollowed bason form, at four feet and a half distance at least, as they require large scope to grow, and considerable space of ground to land them up; give water as soon as planted, and occasionally till they have taken good root, and begin to advance in growth, after which, keep them clean from weeds by occasional hoeing in Summer and Autumn, loosening also the ground about the plants, and when they are three feet high, begin to earth them up as hereafter explained.

Or cardoons may be raised by sowing the seed at once where the plants are to remain, by which they will receive no check by removal in their large growth; sow the seed in small patches a little hollowed, two or three seeds in each, the patches four feet and half asunder, and when the plants are up, thin them to one of the strongest in each patch.

In both methods of raising the plants, they, in their large advanced growth, when three to four feet high, or more, in August, September and October, must be landed up to blanch or whiten; begin by first tying the leaves of each plant together with hay or straw bands, then digging and breaking the ground, forming a good bottom space, earth up round each plant one or two feet high, and as they advance in height, tie up the leaves accordingly, and land them up in proportion, giving the full or final earthing in October, as high as possible, to blanch them a considerable length.

After they are blanched one, two, or three feet, or more, you may dig them up for use as wanted, in September, or October, November, and all Winter.

In

In severe frost defend them with long straw litter, either as they stand, or the plants turned down on one side.

To save seed, some full grown plants may be left in the Spring to shoot up to stalks for seeding.

C H A M O M I L E.

DOUBLE FLOWERED,
SINGLE FLOWERED.

CHAMOMILE is a low creeping perennial plant, raised by slips of, or parting the roots, and continues of several years duration; is an aromatic, cultivated for its flowers, to use occasionally as a family medicine, for chamomile tea, &c. obtained in Summer in their growing state, and may be dried to keep for Winter, or all the year.

A small bed or two may be admitted in the herbary; both the varieties are nearly equally eligible for use, though the single flowered is esteemed of the strongest quality.

They are raised by slipping the side off-sets, or by parting the roots, or by slips of the rooting shoots, all of which perform in Spring, in March, April, or May, &c. planting them in any bed, or border, six, or eight to twelve inches apart; give water; they will soon grow, run, and overspread the ground, and produce a plentiful supply of flowers the same Summer, and the same plants continue several years.

Gather a quantity of the flowers in June, July, &c. dried in a shady place, then put up in paper bags, &c. and housed for keeping till Winter, &c. or as wanted.

C H E R V I L.

CHERVIL is a small annual herb of an aromatic quality, somewhat resembling parsley in growth, its leaves the useful parts, used in soups, fallads, &c.
in

in Winter, Spring, or as required ; always raised from seed every year, in Autumn and Spring, and to remain where sowed.

This is a hardy plant that will grow almost any where. A small bed or two may be sufficient for a moderate family.

It is required principally for Autumn, Winter and Spring ; or may be obtained all the year by different sowings, in Autumn, Spring, and Summer ; but as the plants of the Spring and Summer sowings soon fly up for seed, some should be sowed every month in those seasons, if a constant supply is required. Generally sow a principal crop in August and September, both for use the same Autumn, and to stand the Winter and for Spring ; and sow in February or March, for late Spring and early Summer use ; or if required all Summer, sow a little every month till August.

Sow the seed either in shallow drills six to nine inches apart, or broad-cast and raked in ; the plants to remain where sowed, and they only require keeping clear from weeds.

When the leaves are two to three, to four or five inches high, they are proper for gathering, cutting them off close. They will shoot out again to gather in succession.

To save the seed, leave some plants in the Spring ; they will run to stalks, and produce plenty of seed in Autumn.

C L A R Y.

CLARY is a hardy biennial plant raised every year from seed for transplanting, growing with broad low spreading, wrinkled leaves, of a strong scent, and are the parts used, occasionally in some culinary and other family purposes, but is not estimable as a necessary esculent herb, and therefore not much cultivated.

It is raised from seed in the Spring, sowed for transplanting in Summer, producing leaves large enough
for

for use the same season, and in Autumn, Winter, and following Spring; then shoots to stalk for seed, and decays.

Where this plant is required, one small crop raised annually is sufficient, as it produces plenty of leaves successively. Sow the seed in any bed or border in March or April, and rake it in; and when the plants are up two or three inches in Summer, transplant them eighteen inches apart, to have room to spread. The leaves will acquire a large spreading growth, proper for gathering the same year; generally cutting the large outward ones, the others will advance to succeed them in proper growth for use as wanted.

To save seed, permit some old plants to run in the Spring; they will produce plenty in Autumn.

C O R N - S A L L A D.

CORN-SALLAD, or Lamb's-Lettuce, is a small annual plant, raised every year from seed, growing with a low tuft of small oblong leaves; the parts used, principally in Winter and early Spring, in sallads, as substitute for common lettuce, or as required: being very hardy to stand the Winter; and for which is generally sowed in August, the plants to remain where sowed, and thinned moderately.

One or two small crops are sufficient; an Autumn sowing, in August and September, to stand the Winter, and a smaller portion sowed in Spring, if required in continuance in that season.

But generally sow the principal crop in August and September, in any beds or borders of common earth, and rake in the seed; and when the plants are up, if they stand thick, thin them two or three inches asunder, that they may grow a little stocky; they may either be used occasionally in Winter, or mostly towards the Spring, as may be required, in composition with other small sallad herbs, as cresses, mustard, &c. till March or April, generally gathering the largest plants first, cutting them clean up to the bottom.

If

If required in continuance late in the Spring, or part of Summer, sow some also in February and March,—though they are apt to be rank-tasted in warm weather, and less agreeable than in Winter and the early Spring months.

To save seed, leave some plants of Autumn or Spring sowing; they will produce seed in July or August.

C O L E W O R T.

CABBAGE COLEWORT.

COMMON OPEN COLEWORT.

COLEWORTS are hardy biennial plants of the cabbage family, raised every year from seed in Summer and Autumn, for use both the same year in Autumn and Winter, and the following Spring; very useful and profitable crops, to use as young open greens; but the cabbage colewort, raised from the seed of any of the smaller-heading cabbages, is greatly preferable for tender boiling and eating to the common open colewort, which boil tough and rank-tasted; and therefore it is adviseable to raise only the cabbage colewort for the table, and transplanted in rows a foot asunder; and may be used both in their young open growth, and when more advanced with small cabbage hearts.

It is proper to sow two or three principal crops in Summer and Autumn: a sowing in July, to plant out for a good crop of Autumn and Winter coleworts; and a sowing in August, to plant in September, October, &c. for Spring supply, and to stand in that season without running to seed, as would be the case in all those sowed before August: and what are not used in their colewort state, being permitted to stand, will advance to a cabbaged growth, to cut either with small young cabbage hearts, or when advanced with middling or full cabbaged heads.

For cabbage coleworts, have seed of any of the early or smaller quick-hearting cabbages, as the Yorkshire, Battersea,

Battersea, large sugar-loaf, &c. not only of the large late kinds, which, in a colewort state, are too spreading and open; the others grow close, stocky, and full in the hearts.—See the article *Cabbage*.

At the seasons above-mentioned, June, July, and first or second week in August, sow the seed for the different crops before explained, in open apartments of good ground, laid out in four-feet wide beds, sowing on the surface broad-cast, moderately thick, and rake in the seed regularly. If dry weather, give occasional waterings; and when the plants are up with leaves an inch or two broad, thin out a quantity, and prick them into other beds, and watered; and in which to remain, and advance in strength, three, four, or five weeks. Then when these, and those in the seed-beds, have several leaves about three inches broad or more, transplanting the different crops in July, August, September, and October, &c. in open quarters of ground, in rows a foot apart, by six or eight, ten or twelve inches in lines. As they advance in growth, keep them clear of large weeds, by hoeing as occasion requires; also hoe and loosen the earth about the plants.

According as the coleworts, thus finally-transplanted, advance to some tolerable size, with leaves as broad as a hand, or more, and with moderately full hearts, they are proper to gather for use as wanted, in Autumn, Winter, and Spring, till April or May, either drawing or cutting them clean as they come to hand, row and row, or only the largest, as in a thinning order, every other row, and the same of the plants in the rows, leaving the others to acquire a larger size, with small cabbage hearts, as before observed, or to become young light cabbages.

If coleworts are required in Summer, sow some seed in March and April; and the plants transplanted in May and June.

To save colewort seed, as it is advised to cultivate principally the cabbage colewort, it should be saved from any of the sorts before mentioned, as directed under the article *Cabbage*.

The

The common open colewort, as it never cabbages, or forms close hearts, is more proper to cultivate in fields, for feeding cattle, than for the table.

C I V E S.

CIVES is a small perennial plant, of the onion tribe, but of many small roots together in bunches, propagated or raised by parting the roots, which continue of several years duration, producing a tuft of small awl-shaped leaves, the parts used, or the leaves, stalks and root together slipped off or separated to the bottom; and used in lieu of young onions, early in Spring, or as required, for sallads and other occasions; and for which a small crop merit admittance in every Kitchen Garden.

The plants are very hardy and durable, and a crop once planted will multiply considerably, and abide several years.

They are propagated or raised plenteously by slips of or dividing the roots in the Spring, from February or March, till May or June, or in Autumn, either detaching some side off-set roots, several together in each set, or large roots divided into several parts, smaller or larger, of few or many roots in each, and plant them in any bed or border a foot apart. They will soon advance in growth, and multiply side-ways into large bunches.

To gather them for use, either cut the tops, which will shoot up again in proper succession; or may slip the tops and roots together, in separate small plants, like young onions.

C R E S S E S.

COMMON SMALL-LEAVED.

BROAD-LEAVED.

CURLED-LEAVED.

CRESSES are small annual plants, of quick growth and short duration, raised from seed in Spring,

Spring, Summer, or any time of the year, sowed two or three times every month, to obtain it in young growth for sallads, the leaves the parts used, which are of a warm agreeable relish, while young; and, as they soon grow too old and hot for eating, require sowing often in the season, to have a regular supply of young in succession.

These are principal small sallad herbs, esteemed for their warm property, to introduce in Winter and Spring sallads, and occasionally in Summer and Autumn, and for that purpose should be sowed in principal supplies, in assemblage with mustard, radish, rape, &c.

They are raised from seed sowed in any of the Spring months, from February till May or June: in warm borders, the early sowings in February and March, and in cold nights, &c. may be covered with garden mats; or, at that season, sow in a frame, or under hand-glasses. Afterwards, in temperate Spring weather, sow in any beds, borders, or open compartments; and to have a supply as early as possible in Winter and Spring, or to forward them in a quick growth on any particular occasion, they may be sowed and raised in a moderate hot-bed, in January, February, and March: in all of which the seed may generally be sowed in flat shallow drills, three or four inches apart, sowing very thick, and lightly earthed over with fine mold, scarcely a quarter of an inch, or the seed but just covered; or may be sowed on the surface, first raking it even and smooth; then sow the seed thick, as above-mentioned, smooth it down evenly with the back of the spade, and then sift or spread fine mold over it, just sufficient to cover it regularly; observing, when the plants are up, those raised early in hot-beds, under glasses, should have air admitted daily, by raising the upper-ends of the lights, or taken off in mild days.

However, full crops may be sowed in Spring, in the open ground; in February and March, in warm borders; afterwards in any open compartments, as before observed, in April, May, &c. repeating the sowings every week or fortnight, to have a constant supply of young

young ; or the plants will admit of cutting two or three times, or more, and shoot out again in succession, but will be hotter than young plants.

If a supply is required in continuance all Summer, sow every week or ten days in a shady border, or in any open situation, and the beds shaded with mats from the hot sun ; and give daily waterings, in dry hot weather.

In Autumn, in September, sow in any border or other compartment ; and in October, sow in the South borders, as cold weather will then commence.

And in Winter, if cresses and other small sallad is required, the seed may be sowed in open weather, in November or December, &c. in beds of natural earth, under shallow frames and lights, or under hand glasses ; or a covering of mats in cold nights. But in very cold and in frosty weather, sow always in hot-beds, under frames, all Winter, till February or March ; or also sow in hot-beds when required in Spring, as forward as possible, on particular occasions.

To gather cresses for use, it should be done while the plants are quite young, either cutting them clean to the bottom, in their young growth, or may occasionally only cut the tops low, near the ground ; and, if required, the plants will shoot out again, for gathering in succession supplies ; but these will generally be hotter, and coarser to cut, than the quite young plants.

To save cress-feed, either sow for that purpose in March or April, or leave some rows of plants done gathering ; they will run and produce seed in July and August.

C U C U M B E R.

Early short prickly
Early cluster-prickly
Early long prickly
Common long prickly

Long smooth
Large green Turkey
White Turkey
White Dutch.

CUCUMBERS are very tender annual plants, raised every year from seed, which, for early Spring and Summer

Summer crops, are always sowed and cultivated in hot-beds, from January, February, or March, till the end of May, or beginning of June, as neither the seed nor plants will grow in the natural ground and open air before that time, when warm settled weather, then may be sowed in beds of natural earth, for late crops, and for pickles.

The best sorts to cultivate are a smaller portion of the short prickly for the earliest production, but mostly of the long prickly for the principal early and general crops. Any of the others, for variety.

They are raised in hot-beds, under frames, for earliest crops; and in hot-bed ridges, under hand-glasses, for general Summer crops, in June and July; and in the natural ground, sowed the latter end of May, or beginning of June, for late productions in August and September.

To raise them in hot-beds, there must be proper supplies of horse-stable dung, consisting of the long and short moist litter and dunging of the horses together, of a fresh lively heat, and generally fork it up in an heap in a well-mixed order, to prepare for a week or fortnight to a proper temperature for making the beds; and to have also a sufficiency for lining the sides of the bed, to renew the heat when it declines: likewise frames and glasses, such as one-light, two-light, and three-light frames, the smaller frames to place on hot-beds, in which to sow the seed, and raise the plant to a proper growth for final transplanting into large hot-beds defended with larger frames; and for later hot-bed crops, to have hand-glasses, either leaded squares or bells; and also large garden mats for covering the glasses of the frames, and hand-glasses, &c. of nights and bad weather, till June.

For early crops, some may be sowed in a hot-bed, in January, February, or March, to produce fruit for gathering in two months or ten weeks after sowing; or for later production, sow in April or May, also in hot-beds, as they will not succeed without that assistance before the end of May or beginning of June.
Make

Make first a small hot-bed of a one or two-light garden frame, put in five or six inches depth of rich dry earth, and fill one, two, or three middling pots with the same kind of mold, and placed within the frame: sow the seed, some in the earth of the bed, and some in the pots plunged in the earth. The plants will soon come up: when they are two or three, or four days old, or with the seed-lobes half an inch to an inch broad, draw them up, and prick some in small pots four in each, plunging them in the earth, and may also prick some into the earth of the bed. Give a little water, the chill taken off a little, if an early-season, January and February, &c. and apply only just to the roots; put on the glasses, but give air and vent to the warm steam rising from the bed, by tilting the lights behind, half an inch to an inch or two high, according to the heat of the bed and temperature of the weather. Cover the glasses every night with garden mats: give occasional light waterings when the earth appears dry; and keep up a moderate heat in the bed by lining the sides with hot dung, continuing to give air daily in moderate weather.

When the plants are advanced in growth, and produced the first two rough, or proper leaves, one to two or three inches broad, they should be transplanted into a larger hot-bed for one, or more, two or three-light garden frames, finally to remain for fruiting; but observe in the mean time, when they begin to form the first runner-bud, rising at the base of the second rough leaf, it must be cut or pinched off close to the joint to promote strength, and to encourage their putting forth fruitful runners.

For this their final transplanting, make a hot-bed for one, two, or more, two or three light frames long ways, a yard high in dung, and when reduced to a moderate lively heat in six, eight, or ten days, earth the bed within the frame, laying it in a little round hill, just under the middle of each light, eight or ten inches thick, earthing the other parts between the hills only about three inches for the present, till the heat is quite

quite moderate, for fear of burning ; then the same, or next day, when the earth of the hill is warm, bring the plants, turn them out of the pots with the ball of earth about the roots, or those pricked in the bed, take up also with balls, and plant four plants in the middle of each hill of earth ; give a light watering, shut down the glasses close, shade them a little from the mid-day sun, a few days, till they take root, and cover the glasses every night with mats, or straw litter ; admit air every day in moderate weather, by tilting the upper ends of the lights from half an inch to an inch or two high, as observed in the seed-bed culture ; give occasional moderate waterings, and support a proper heat in the bed, by lining with hot dung when decreased, applying it to the sides eighteen inches wide ; observing in the mean time, when the heat is moderate, to add more earth between the hills of plants, raising it by degrees equal with the top of the said hills, in a level order ; after which, according as the plants send out runners, train them out regular along the surface ; and in hot sun shining days, if the sun is too powerful through the glass, to make the leaves of the plants flag considerably, give a moderate shade over the glasses in the heat of the day.

In the foregoing crops, give proper attention both to admit air every day when the weather is temperate, or even when frosty, if a great heat and steam in the bed, and always more freely in sunny mild days than when cloudy and cold, and the portion of air increased as the warm season advances, opening the glasses behind only a little at first in the morning, later, or sooner, according to the season of the year, increasing the opening from half an inch, to one or two inches in the heat of the day, and shut again in the same gradual order towards afternoon, and shut close in the evening ; or in the early state of the bed, if a considerable heat and steam, leave the glasses open half an inch, hanging a mat before the opening : give also waterings, once, twice, or three times a week, according to the season, and as the earth appears dry, always with soft water
of

of a pond, river, or rain water, &c. as convenient; and when the heat of the bed declines, apply a lining of hot dung to the sides, in proper time, eighteen inches wide, and as high as the dung of the bed; and continue covering the glasses every night, till the beginning or middle of June. And the glasses may remain on the frames till the middle or end of June, then may be drawn off in warm days, and put on of nights, and removed quite off in July, or put on when much rain; but tilted behind, to admit plenty of free air.

When the plants begin to blossom, and shew fruit, appearing in embryo at the base of the female flower, this should be impregnated by that of the male; which operation generally perform the same, or next day, after the flowers expand; taking off a male blossom, easily discoverable by its not having any fruit in embryo at its base, as in the females, pull away the flower leaf, or petal, clean to the central part, which, containing the fecundating dust, apply to the stigma in the centre of the female flower, to discharge thereon some particles of the fertilizing powder; proceeding in the same manner to set or impregnate each fruit according as the flower expands, and after each impregnation, the young fruit will be observed to swell fast in growth; being a very effectual and necessary operation to early cucumbers in particular, especially while confined under frames from the free air, and occasionally to melons, and to no other plants.

When the cucumber fruit is advanced in growth, three or four to six or eight inches long, and while young and green, should be cut or gathered for use.

HAND-GLASS CROPS.

FOR general Summer crops, to ridge out in hot-beds, under hand or bell glasses, sow some seed of the long prickly cucumbers in a hot-bed, the middle or towards the latter end of March, or beginning or middle

dle of April at the latest ; and when the plants are up, three, four, or five days, prick some in the same, or another hot-bed, four inches asunder, or some in small pots, four plants in each, and plunged in the earth of the bed ; give water, and shade from the sun till they take root ; and managed as directed for the early plants, in regard to giving air every day, occasional waterings, covering the glasses every night, &c. And when the plants have produced their first rough leaves, one, two or three inches broad, and stopped at the first joint, by taking off the end of the first runner bud, as in the early plants aforesaid, they should be transplanted into large hot-beds, under hand-glasses, in the middle or end of April, and in May.

Provide for this occasion a quantity of horse-stable dung, the long and short moist litter and dung together, of a good lively heat, and either make a hot-bed on the level ground, three and a half or four feet and a half wide, and two feet, or two and a half to three feet high, and earthed at top six or eight inches thick ; or may dig a trench in any compartment of the kitchen-garden, three to four feet wide, and twelve to fifteen or eighteen inches deep, in which make the hot-bed two feet or two and a half depth in dung, earthed over as above, with the earth digged out of the trench, forming the top four feet wide or more : and in either method, set on the hand-glasses three feet asunder, along the middle of the bed, and when the earth is warm, the same or next day, remove the plants from the beds where raised, with balls of earth to the roots, if convenient ; and forming the earth under the glasses a little hollow, plant four under each glass. Give a little water, put down the glasses, and shade them from the sun till they have taken root. Cover the glasses every night with mats, and admit air to the plants, by degrees, every day, by propping up one side of the glasses, one to two inches ; but shut close every night till June ; likewise give necessary waterings.

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When the plants push runners of some considerable length, extended to the sides of the hand-glasses, these should be raised for the plants to run out, as soon as the weather is settled in warm, the beginning or middle of June, when raise each glass upon three props, three inches high, and train out the runners from under them, in regular order; but cover them, if cold nights, with mats, the first week or two, continuing the glasses over the plants, and supply them now with water in dry weather two or three times a week. They will produce fruit in June, July and August, &c.

Or in hot-beds as above, under hand-glasses, if omitted raising plants, for transplanting therein, seed may be sowed under the glasses in April or May: hollowing the earth a little, put in several seeds under each glass, and when the plants are come up, thin them to four of the strongest in each patch; they will come in for a good crop towards the end of June, all July, and August.

Likewise, in April and May, in scarcity of dung to make continued regular beds, may dig holes two or three feet wide, a foot or eighteen inches deep, and four feet asunder in the row: fill them with hot dung, trodden down moderately firm, earth it over six inches, and either put in plants or seed, as above. Put on the glasses, they will produce good crops, from June till September.

Or, for want of hand-glasses, make a hot-bed, or holes, as above-mentioned, in the end of April, or in May. Put in plants or seed, and cover with mats of nights and bad weather; or the bed defended with oiled-paper frames, to remain constantly.

Let all these crops of cucumbers, under hand-glasses, &c. have proper supplies of water, in dry warm weather, two or three times a week, or every day, in the hottest season.

NATURAL-GROUND CROPS.

NATURAL-GROUND CROPS of cucumbers are obtained by sowing in compartments of rich earth, the latter end of May or beginning of June, when the weather is settled in warm and dry;—to produce late fruit, and for picklers, in August and September.

They may be sowed, some in a warm border, and the main crop in any open compartment. Dig the ground; then form shallow basin-like holes with the hand, a foot or fifteen inches wide, a yard distance in the row, and five or six feet between. Sow in the middle of each hole eight or ten seeds, half an inch deep; and when the plants are come up, and begin to push the rough leaves in the centre, thin them to four of the best in each hole; earth up the flanks a little, and give water; and in their advanced growth, train them out regular in different directions.

Let this crop have necessary supplies of water in dry weather, both in their young and advanced growth, two or three times a week; or every day in very hot weather, in July and August.

These natural ground crops will seldom begin to bear before August, and continue till about the middle of September; in which time they will bear plentifully both for picklers and other purposes, generally gathering them quite young for pickling, when only two or three inches long.

As cucumbers are climbing plants by means of their tendrils, some branchy sticks may be placed to a few, they will readily ascend upon them, and thereby produce their fruit at a distance from the ground, free from spots, and be firm and well-flavoured; or some may be sowed or planted close to a south wall, and the runners trained thereto, they will produce fine clean well-flavoured fruit.

TO SAVE SEED.

To save cucumber seed, leave some of the Summer fruit to attain full size, and till they grow yellow ; then cut them from the plant, placed in the sun two or three weeks, then the seed washed out from the pulp. Spread to dry, and then put up in bags, boxes, &c.

D I L L.

DILL is a hardy annual plant of the aromatic kind, similar to fennel in taste and growth, but smaller, growing with finely-divided leaves, and a slender single stalk, bearing an umbel of seed at top, which and the leaves are the useful parts ; the latter for culinary purposes, and the seed umbels used in pickling, &c.

It is raised from seed sowed every year in February, March, or April ; or in August to come up sooner and stronger in the Spring : sow it in any open compartment broad-cast and raked in, or in drills a foot apart ; the plants to remain where sowed, and when they are up two or three inches, clear them from weeds, and thin those sowed broad-cast six or eight inches distance ; likewise thin those in the drills where too thick : they will shoot up into stalks in Summer, and produce seed umbels for use in Autumn.

Save seed to sow every year ; it ripens plentifully in Autumn ; or from scattered self-sowed seed many plants will rise naturally.

E N D I V E.

GREEN CURLED ENDIVE

WHITE CURLED ENDIVE

BROAD-LEAVED UPRIGHT BATAVIA
ENDIVE.

ENDIVE is an annual, or at most a biennial plant, raised every year from seed in Summer, for
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transplanting the same season and in Autumn a foot distance, and when at full growth the leaves tied up to blanch; which are then the parts used for salad, and culinary occasions in Autumn, Winter, and Spring.

Any of the kinds may be cultivated occasionally, but sow principally the green-curled sort for the main crops being of the most stocky full growth, and the hardiest to stand the Winter.

They are all raised from seed sowed in May and June till August; but the early sowings before June will run to stalks the same year; so should sow only a small crop before that time, in May, for early Summer endive; and in the beginning or middle, and latter end of June, sow the first main crops for Autumn. Sow also a principal succession crop in July for Autumn and Winter, and the last sowing the beginning of August for late supplies in the end of Winter and following Spring, sowing each crop thin in beds of good earth, and rake in the seed: when the plants are an inch or two high, thin them where too thick; and when they are three or four, to five or six inches growth, should be transplanted in June, July, August, September; draw up the strongest, prune the tops of straggling long leaves and the ends of the roots; and allotting them a compartment of rich ground, plant them a foot to fifteen inches distance; watered at planting and till they have taken root.

In the above order plant out a moderate portion in June, full crops in July, August, and September; observing in September and October to plant out some in a warm dry situation, and on south borders, to stand the Winter more effectually, and for Spring supply till April or May; or in October, or November, plant some stout plants thickly along the south sides of raised ridges of earth, either in a border raised towards the wall, or detached, raised two feet or more behind sloping to the sun, for the plants to remain drier in Winter, as being very apt to rot in that season in low wet grounds.

According as the plants of the different crops attain full growth, stocky, and full in the heart, some should have the leaves tied up together every week, or fortnight, to blanch or whiten, and render them tender, crisp, and mild tasted; performing this always in dry days, having strings of fresh bafs, or small oſier twigs, and in the laſteſt full plants, gather up the leaves of each regular, and tie them together, above the middle, moderately cloſe; each parcel thus tied up, will be well whitened, &c. in about a fortnight, when they may be cut for uſe as wanted; continue tying up ſome in the above order all Autumn and Winter, &c. but in the latter ſeaſon obſerve to perform it only in open dry weather, and in ſevere froſt cover ſome with long litter, &c.

To ſave endive ſeed, either leave or tranſplant ſome ſtrong plants in February, or March; they will ſhoot and produce plenty of ſeed in Autumn.

F E N N E L.

COMMON SWEET FENNEL.
DARK-GREEN LEAVED.

FENNEL is a hardy perennial plant, raiſed from ſeed and by off-ſets of the root, continuing of ſeveral years duration, producing tuſſis of leaves in Spring, Summer, and Autumn, which are the parts uſed; is of a high flavoured aromatic quality, much eſteemed to eat with pickled ſalmon, mackarel, &c.

It is eaſily raiſed from ſeed and ſide off-ſets of old roots; a ſmall crop is ſufficient for the ſupply of a family, and the ſame plants continue by the roots ſeveral years, producing plenty of leaves annually, from Spring till Winter; ſhoots up ſeed ſtalks in Summer.

Sow the ſeed in February, or March, or in Auguſt, in any ſituation, either in drills a foot apart, or broad-caſt on the ſurface, and rake in the ſeed; and when the plants are three or four inches high in Summer, thin them

them a foot asunder, and clear out weeds; or some may be transplanted that distance: and to raise a supply by off-sets, the old roots generally divide below in several smaller, which may be slipped off in the Spring, Summer, or Autumn, and planted a foot apart, they will furnish present leaves either till seedling plants come in, or for a continuing crop.

Or for immediate supply of fennel leaves, some large full roots may be procured and planted in Spring, Summer, and Autumn.

As fennel shoots up strong stems for seed in Summer, it is proper to cut them down either wholly, or in part, where the seed is not wanted, both to encourage a production of young leaves in proper succession, and to prevent its seeding and disseminating it about the ground, where it would come up as troublesome as weeds.

If seed is required, permit some stalks to run; they will produce plenty in large umbels.

F I N O C H I O,

OR AZORIAN FENNEE.

FINOCHIO is an annual plant of the fennel tribe, and high flavoured, raised every year from seed in several sowings in Spring and Summer, as being but of short duration, grows with a thick stem, swelling and fleshy below, which being earthed up to blanch, is the parts used to slice in sallads, and for culinary purposes.

It is always raised from seed in Spring and Summer, sowed every month from March till July, as the plants continue but a short time good for use before they run: sow the seed in an open space of rich ground in drills two feet asunder; and when the plants are three inches high, weed and thin them, five or six inches distance, hoeing and loosening the ground between and about the plants, to encourage the stems increasing to a good substance, which when at full, or

of some considerable growth, earth up on each side five or six inches, to make them white and tender; they will be blanched for use in a fortnight or three weeks.

If required in constant supply, sow a small or moderate crop every month, from March till the end of July, as before intimated, and each crop managed as above, they will arrive at full growth in succession from June to November, or December; the late crops in Winter should be covered when frosty weather.

Seed for sowing may be saved, by leaving some plants of the forward crop to run.

G A R L I C K.

GARLICK is a bulbous-rooted perennial plant, raised or propagated by dividing the small cloves of its compound root, and planted one crop annually in the Spring, growing to a large bulb in Summer, composed of small cloves, which are the parts used in various culinary dishes, and efficacious as a medicine in many cases; obtained for use in June and July, and to dry for keeping the year round. Very useful in a family.

It is planted in February, March, or beginning of April at latest; when having some large bulbs of garlick, divide them into separate cloves, or smaller bulbs, which then plant in beds, in rows lengthways, six to nine inches asunder, and three inches deep; planted either with a blunt-ended dibble, or draw drills the above distance and depth: place the cloves in the drills, thrusting the bottom into the ground, and then earthed over regularly the depth of the drills. When the plants come up, keep them clean from weeds during their growth, till July; at which time the bulbs will be full grown, discovering this by the leaves changing yellowish and decaying; then should be taken up.

But if some are required sooner, for present use, a few may be drawn up in May and June, in their young growth.

However,

However, let the principal supply attain full maturity, and when the leaves begin to decay, dig them up; dried and tied in bunches, and housed to keep for use, as wanted.

H O R S E - R A D I S H.

HORSE-RADISH is a perennial-rooted plant, raised by off-sets and cuttings of the roots, continuing in production several years, producing large long root-shoots of a hot nature, and are the parts used, always to eat raw, scraped in fine shreds, and used as sauce, or as a sallad, &c. at any season of the year, but principally in Autumn, Winter and Spring, in best perfection.

It is propagated always by the off-sets from the bottoms or sides of the main roots, the top part cut off about two inches long; or, in want of sufficiency of these, some old knotty roots may be cut into pieces, two inches long, for sets.

The season for planting is October and November, or February and March, collecting a proper supply of sets as above; the ground trenched one or two full spade deep: then, having a long, thick, blunt-ended dibble, plant the sets in rows, two feet distance by one foot in the row, making a hole for each set, ten or twelve to fifteen inches deep, that they may at that depth send up long straight root-shoots, covering in the holes with the earth. Or they may be planted in trenches, in digging the ground, opening a first trench two feet wide and a spade deep, loosening the bottom, in which place a row of sets along the middle; dig the next trench the same width and depth, turning the earth into the first upon the sets.

Thus, in either method of planting, the sets will send up long straight root-shoots, producing a head of leaves at the surface of the ground; and the roots will enlarge in growth till October, when, if of a tolerable size, may begin digging up some for use, as wanted at that time, or all Winter, &c. But if not particularly

wanted this first year, as the shoots will rather be small, if permitted to have another year's growth, they will be fine and large by next Autumn.

When they are to be taken up for use, dig out a trench along the first row, or as far as wanted, going as deep as the bottom of the upright root-shoots, which then cut off with a knife or spade transversely, close to the mother stools or seats, leaving those undisturbed in the ground, earthing them over again the proper depth, and they will send up an annual production of shoots as above, for many years to come.

H Y S S O P.

OFFICINAL, or GARDEN HYSSOP.

HYSSOP is a small under shrubby ever-green perennial, of the aromatic tribe, raised by seed, slips of the branches, and parting the roots, continuing several years in root and top. The leaves, or young shoots and leaves together, are the parts used sometimes as a pot-herb, and occasionally the tops and flower-spikes for medicine. Is green all the year.

Sow the seed in March or April, a small portion, in any bed or border of light earth, broad-cast and raked in; or in small drills six inches apart each, for transplanting in Summer; or some may be sowed in a drill for an edging, to remain. The others, when three or four inches high, in June, July, &c. transplant them in showery weather, half a foot apart, till Autumn or next Spring, then planted a foot to fifteen or eighteen inches asunder, to remain; or some planted as an edging aforesaid.

Or slips of the young side-shoots of old plants, in March, April or May, &c. planted in a shady border, or where convenient, and watered, will grow freely. Likewise bushy plants, advanced with many bottom stems, may be slipped or divided with roots to each, and planted a foot distance.

One

One crop will continue several years, furnishing leafy shoots for use at most seasons, and flower spikes in Summer.

JERUSALEM ARTICHOKE.

THE Jerusalem Artichoke is by many esteemed for its large tuberous fleshy roots, and by the off-sets or cuttings of which the plants are propagated and perpetuated in a perennial state, but fresh planted every year in the Spring, in rows two or three feet distance; shooting up a tall stem in Summer, and the root multiplies into many tubers, growing to a large size by October, for use then, all Winter, and following Spring. Good to boil, and mash with butter, &c.

This plant is raised in one crop, planted in the Spring, February, or March. Having some large or middle size roots, cut them into several pieces, with an eye or two to each: plant them in any open situation, by dibble, in rows two feet and a half, or a yard apart, and eighteen inches distance in each row, and three or four inches deep. When the plants come up, give occasional hoeings to keep down the weeds, and hoe some earth about the bottom of the stems of the plants, which will continue in growth till September or October, at which time the roots will be arrived at full growth; generally a good cluster of them to each plant.

They may then be dug up for use, as wanted, and all Winter, and following Spring.

But it will be proper, about November, when the stalks decay, to dig up a quantity, and lay them in sand under cover, to be ready for use as wanted in Winter, especially in frosty weather, when the others are frozen in the ground.

KIDNEY-

KIDNEY-BEANS.

DWARF KINDS.

Early white Dwarf	Black speckled Dwarf
Early yellow Dwarf	Red speckled Dwarf
Early Negro	Dun-coloured Dwarf
Early speckled Dwarf	Striped Dwarf
Battersea white Dwarf	Chinese speckled Dwarf
Canterbury white Dwarf	Large white Dwarf.

RUNNER KINDS.

Scarlet Runners	Battersea Runner
Large white Runners	Black Runner
Dutch white Runners	Variable-seeded Runner.

THE kidney-beans, in all the varieties, are annual plants, raised every year from seed, sowed in several crops, from April till August, producing great quantities of seed pods, which, while they are young, green, and tender, are the parts used, obtained in plentiful supplies from June or July, till October; and are very profitable. Summer and Autumn crops, to cultivate both in family gardens, and for sale in the markets. They are also obtained in early production in Spring, by the assistance of hot-beds and hot-houses, &c.

Of the above two tribes of kidney-beans, Dwarfs and Runners, the former are of low bushy growth, ten or twelve to eighteen inches high; the latter run with long slender twining stalks, several feet high upon proper support, and require tall sticks or poles to climb upon, or planted near walls, &c. and have lines suspended from above, on which to ascend in their twining growth. But for considerable principal crops, the Dwarfs are most eligible, as not requiring any support, and in general the beans are most esteemed for the principal supply; though it is also proper to have moderate crops

crops of the Runners, especially of the Scarlet and large White, for their very prolific property and long continuance in bearing; the pods thick, fleshy, tender and good, while young. The Dutch Runner is also a great bearer, with fine long fleshy pods, but not near so durable in bearing as the two former.

The dwarf kidney-beans are sowed every month, from April till July, or beginning of August, to obtain a constant succession of young pods during the proper season, as one crop continues only about three or four weeks in good bearing.

For the first crops, have seed of some early dwarf kinds, or of the Canterbury, Battersea, or speckled dwarfs, and of which may sow a moderate portion the beginning or middle of April, if dry settled mild weather, in a warm dry border, or other compartment; for the beans being tender, are very apt to rot at this season, if a cold or wet soil, or much rain falling after they are sowed, therefore sow a larger crop towards the latter end of April: drawing drills only about an inch deep, and two feet and a half asunder; sow a row of beans in each drill only two inches apart, as many fail at this season, and cover them in with the earth not more than the depth of the drill, for fear of rotting them. After sowing this crop, if much rain or cold weather happen, examine the beans in the ground, to see if they remain sound, or appear most of them in a decayed state; and in the latter case, sow again directly, if dry weather.

But for the main crops, sow plentifully in May and June, in any open compartments of lightish good ground, a portion once a fortnight or three weeks, of the Canterbury, Battersea, and speckled dwarfs, as principal bearer, or of any other sorts, except the early, as they continue but a short time in bearing. Drawing drills two feet and a half asunder, and about an inch and a half deep, sow the beans two or three inches apart, and earth them over evenly: sow more of the same sorts twice in July, and some the beginning of August, for the last crop; and from these different sowings in the
order

order as above, a regular succession will be produced from June or July till October.

Or for a few early, some may be sowed in a gentle hot-bed in April, to raise the plants an inch or two in growth, to transplant into a warm border the beginning of May.

According as the plants of the different crops advance in growth, hoe them occasionally to kill the weeds, and draw some earth up to the stems of the plants, which will strengthen and forward their growth.

Gather the pods always while moderately young, not let them remain to grow old, and the plants will bear longer in proportion.

Earliest crops of dwarf kidney beans are obtained by sowing in hot-beds, and hot-houses in Winter and Spring.

Some early dwarfs may be sowed in a hot-bed, under frames and glasses, in February, March, and April, or in the two latter months, in a hot-bed arched over with hoops to cover with mats of nights and bad weather, sowing either thickly in a small hot-bed; and when the plants are an inch or two in growth transplanted into a new and larger hot-bed, to remain, planted in rows cross ways, fifteen inches distance, or the beans may be sowed in that order at once, in a large hot-bed, to continue. Give the plants air every mild day; occasional gentle waterings; they will produce moderate crops in March, or April and May, till June, when they will be succeeded by the early natural crops.

But in hot-houses, are obtained early in greater perfection, and less trouble: sowing the beans in January, February, March, and April, in pots of rich light earth, four in each pot, the pots being previously placed in the hot-house, they will soon come up, when give the plants frequent waterings, and they will bear plenty in Spring, till May and June.

Runner kidney beans are planted in May and June, seldom earlier, as they are tenderer than the dwarfs, and the beans very liable to rot by wet and cold; the beginning, or middle of May is soon enough to sow
any

any principal crop ; and sow a full crop in June ; the scarlets and large white are most plentiful and longest bearers : two crops sowed as above, will bear from July, till October or November ; but the white Dutch runners are very proper, as most excellent fine tender eating beans, and, of which, sow a crop in May, June, and July, as they do not bear so long as the scarlets, &c. any of the other running sorts may be sowed at the same time, all of which may be sowed both in open situations, and on borders near walls, &c.

In sowing them in open or detached compartments, draw drills four feet asunder, and an inch and half deep, or draw two drills together a foot apart, then allowing a space of five feet, draw two more drills, and so proceed with others, as many as intended, as these sorts require considerable scope of room ; drop the beans in the drills three or four inches asunder, and earthed over evenly the depth of the drills.

Small portions of scarlet and large white runners may be sowed in pots or boxes, &c. where no garden, and placed where convenient.

According as the plants are come up, three or four, to five or six inches high, hoe some earth to the stems, and cut down all weeds ; and when they begin to send forth their runners, place a row of sticks or poles to each row of plants, and conduct the runners to the poles at first, or any sowed near walls, &c. may extend lines from the top to the bottom for the plants to ascend upon. They will all readily catch the poles and lines, and soon ascend considerably, flowing and bearing at the joints in long succession.

Generally gather the pods of all the runner kinds while they are young, when fleshy, brittle, and tender.

To save seed of kidney beans, either sow some for that occasion, or leave some rows ungathered of the main crops, or the remainder of what are not gathered for use ; they will ripen in August and September.

L A V E N D E R.

LAVENDER is a shrubby aromatic plant, raised by slips and cuttings of the branches, and is of several years duration, producing long spikes of small blue flowers in Summer, which are the parts used to put in bags to scent clothes, and for lavender water.

It is propagated by slips or cuttings of the young shoots of the branches in March, April, May, June, &c. five or six inches long, planted in a shady border six inches apart; and when well rooted, may be transplanted in Autumn or Spring, where they are to remain, eighteen inches, or two feet distance.

They produce the flower spikes in June, July, &c. when gather what are wanted.

L E E K S.

BROAD LEAVED.

NARROW LEAVED.

THE leek is a biennial plant, raised every year from seed in the Spring, both to remain and transplant; is a most useful esculent, wholly eatable, both in the bottom, neck part, and leaves, used for soups, broths, stewing, and to boil and eat like greens; in best perfection the end of Autumn, all Winter and Spring, till April or May.

It should be cultivated in principal crops, either some sowed thinly with onions, and when the latter are gathered off in August, the leeks have room for their full growth; or may be wholly sowed in beds, both for some to transplant, and the rest to remain, and thinned to regular distances.

Sow the seed in the end of February, or in March, for the main supply; also sow in April and May for late crops; sowing in four feet wide beds of good rich earth, and rake in the seed; and when the plants are advanced three or four inches in growth, in May and June,

June, weed and thin them moderately; and when designed for transplanting, they are proper for this when five or six to eight or ten inches high, in June, July, and August, and for which thin out a considerable quantity in showery weather; prune the long weak tops of the leaves, and the root fibres, and plant them by dibble, in rows a foot apart, by six inches in the row, inserting them down to the leaves, with the neck part mostly into the ground, to be long and white; if dry weather, water them till they take root; afterwards keep them clear from weeds by hoeing, and by which, loosen the ground about the plants, to encourage their growing large, to a proper full size for use, by September and October, &c. those which remain in the seed-beds should be thinned regularly, six inches to a foot distance, or if any were sowed, thin with onions, and the onions being cleared off in August, the leeks will have room to grow to a large size for use, the end of Autumn, and in Winter.

Some of the late sowed leeks of April and May, should be planted out in August and September to stand for Spring use, continuing till May without running to stalks.

The leeks of the main crops sowed in February or March, will be advanced to full growth by September or October, to take up for use at that season, and all Winter, and part of the Spring; the others will remain for late Spring crops.

To save leek seed, either leave, or transplant some in February in a sunny situation, in rows, two feet distance by one foot in the rows; the seed will ripen in September in large round heads.

L E T T U C E.

Common white Cabbage

Lettuce

Green Cabbage Lettuce

Brown Dutch Cabbage

Lettuce

Grand admirable or Royal

Cab. Lettuce

Honey Cabbage Let-
tuce

Roman Cabbage Let-
tuce

Imperial Lettuce

Cilicia

Cilicia Lettuce	Red Cos Lettuce
Capuchin Lettuce	Egyptian early green Cos Lettuce
Green Cos Lettuce	Ball Cabbage Lettuce
White Cos Lettuce	
Spotted Cos Lettuce	

LETTUCES are all annual plants, raised every year from seed, in several crops, sowed every month, from February, March, &c. till August and September, both for transplanting, and to remain where sowed, and thinned a foot asunder, growing to full cabbaged size in Summer and Autumn, in greatest perfection, and in an inferior growth in Winter and Spring, the leaves the useful parts, for sallads, and various culinary occasions, when large, with full cabbaged hearts, in Summer, &c. and occasionally in their young open growth, in Spring, and other times, as required, in default of cabbaged heads.

All the sorts of lettuce in their advanced growth, cabbage with full hearts, white, tender, and sweet, but generally bitter in their young open state, the cabbage lettuces commonly head in a round close squat growth, the cos kinds growing oblong and upright.

They are all raised plentifully from seed, in Spring, Summer, and Autumn, for use the same year, requiring to be sowed every month, from February or March, till July or August, as the plants of each crop, after attaining perfection in their cabbaged growth, soon fly up to feed stalks the same season; and some should be sowed the middle of August, and in September, which will not run, but stand over the Winter, in young growth for earliest Spring and Summer lettuces.

The principal varieties of lettuce, most eligible to cultivate for general crops, are the common white cabbage lettuce, brown Dutch, green cabbage lettuce, green and white cos, to cultivate at any season required, and the four latter are hardy for Winter, and early Spring, the grand admirable and Roman are excellent for Summer and Autumn; the cilicia is also a fine Summer

Summer and Autumn lettuce, any of the others may be raised to have a greater variety; but always cultivate plentifully of the green and white cos for full cabbaging, both for early, and general Summer and Autumn crops, till October or November, &c. also the common white cabbage lettuce; and for hardy lettuces to stand the Winter, the green cabbage lettuce, brown Dutch, and green and white cos are proper, and the early green Egyptian lettuce is good for forcing in hot-beds and forcing houses, and for other early crops.

To have a constant supply of lettuces, the seed is sowed every month, from February or March, till June or July, for the principal Summer crops of full heading lettuce; and in August and September for late Autumn and some Winter plants, and a principal part to stand for Spring, and early Summer heading lettuces.

For the early and first main crops, sow a small portion in January or February in a warm border, for earliest spring sowed lettuces, and a larger supply in March in open compartments, or in any beds or borders for a full crop; or for the earliest crop, some may also be sowed in a gentle hot bed, or in a frame, in the beginning of February, especially if the Winter standing plants are cut off by the severity of the frost in Winter; and in either method, when the early plants are one, two, or three inches high, prick some either on a warm border, four inches apart, or under a frame for better protection and forwarder growth, or some in a slender hot-bed to bring them as forward as possible, and in their advanced pricked out growth, when of some tolerable strength, in March, April, and May, a quantity may be thinned out, and planted in beds or borders ten or twelve inches asunder, to acquire full size; and of those sowed in March in open compartments for first main crops, should, when three or four inches high, in May and June, be thinned, and some planted a foot distance, all for full cabbaging.

However, for general sowing, the proper season is the middle or latter end of February, March, and April;

April ; when sow larger portions for principal early and first main crops, on warm borders, and on any four feet wide beds, and in open compartments ; all sowed broad-cast, and rake in the seed, the plants both to remain where sowed, and thinned a foot asunder, and for transplanting that distance, and some may be gathered in the seed beds in young open growth in Spring, especially of the white cabbage and honey lettuces, till the principal plants advance to a cabbaged growth ; observing, according as the plants, designed for cabbaging, advance in growth three to four or five inches, plant out a good portion in rows a foot or fifteen inches apart, and a foot asunder in the rows, and watered ; those in the seed-bed thin by hand or small hoeing the same distance, the different crops will cabbage, some moderately in May, but more fully in June, and in full perfection in July.

Continue sowing in April and May, for principal successional Summer crops, and in June and July, and beginning of August, to have a plentiful succession continued till Autumn and Winter ; and of each crop, when of proper growth, transplant plentiful supplies in showery weather the above-mentioned distances, and thin those remaining in the seed-beds in the same order, and thus the plants of these crops will come into full growth in succession to the former, in June, July, August, September, till October or November, &c.

In the forward crops, when the plants of the cos lettuce are advanced to a large growth, beginning to turn, or close the inner leaves, they may be forwarded in cabbaging by tying the leaves together with strings of bass, moderately close

For Winter lettuce, and to stand till next Spring for early crops, sow in the middle of August and beginning of September, some green and white cos, brown Dutch, green cabbage, ball, and Capuchin lettuce, in beds or borders in warm situations, some to remain where sowed, and a good quantity transplanted in September and October on warm borders, and in frames, or beds, to have

have shelter of glasses and mats in cold nights and bad weather in Winter ; therefore, in the middle or end of September, and beginning of October, when the plants of the August sowing are two or three inches high, thin out a quantity from the seed beds, and plant them in south borders and other warm situations, in rows six inches apart, by four inches in the row, and of which some will probably be proper for use in Winter ; especially of the cabbage and brown Dutch lettuce in the seed beds, thinned out in a young growth, but the greater part remains till Spring ; and in October, or beginning of November, the late-sowed plants of September should be thinned, and some of the cos lettuces, &c. in particular, planted in frames three or four inches asunder, to have protection of the glasses every night, and bad weather all the Winter, or some pricked under hand glasses, or in want of frames, &c. plant them in beds the same distance, and arched over with hoops, to have occasional covering of mats ; likewise prick some of the different sorts in warm south borders under walls, leaving a portion in the seed-beds, thinned three or four inches distance ; all of which to remain for early Spring and Summer supply in March, April, May, &c. those in the frames, or other places of shelter, should have the full air in all mild dry days, defended from great rains, snow, and in frosty weather, with the glasses or other covering mats, with additional covering of mats or straw litter in severe frosts.

In the Spring, about March and April, if most of the plants survive the Winter, those remaining thick in the borders should be thinned ten or twelve inches asunder, and those thinned out planted into open situations the same distance: and at the same time all the frame plants and others wintered in beds defended with hand glasses or mats, should be transplanted into beds or borders, &c. the whole to remain to attain full growth, or advance more or less in cabbage hearts: in which the cos lettuces may be forwarded in April and May, by tying the leaves of the largest plants together ; they will supply

supply the table till the early and general crops of Spring-sowed lettuces arrive to proper size for gathering.

Early lettuce are obtained cabbaged in Winter, by transplanting some of the strongest Autumn-raised plants into hot-beds and the borders of forcing stoves, in December, January, and February, and will cabbage in tolerable perfection in that season, and early in Spring. When this is intended, some strong plants should be defended, with frames and glasses from frost and bad weather, ready to transplant with balls of earth into the hot-beds, &c.

To save lettuce-seed, leave or transplant some of the early or forwarded plants of the main crops in April, May, or beginning of June, fifteen inches asunder; they will shoot to stalks, and produce ripe seed in August and September.

LOVE-APPLE, or TOMATOES.

RED LOVE-APPLE,
YELLOW LOVE-APPLE,
CHERRY-SHAPED LOVE-APPLE.

THE Love-Apple is a tender annual plant, raised from seed every Spring on a hot-bed, one small crop, for transplanting in May into warm borders, growing with large long-tailing stalks, producing bunches of large fruit in Autumn, which, when ripe, are the parts used, to put in soups, &c. and both the green and ripe fruit to pickle.

Where these plants are required, sow the seed in a hot-bed the middle or end of March, or in April; and when the plants are two or three inches high, if some are pricked in another hot-bed, or in the same where raised, they will advance in a stronger growth for transplanting; or some may be pricked singly in small pots plunged in the hot-bed, to be more readily transplanted, with balls of earth to the roots. In the middle or latter end of May, or beginning of June, plant them with balls

balls of earth into South borders, to have the full sun to ripen the fruit more effectually ; or planted close to south walls. Give water ; and in cold nights, defend them with hand-glasses, or large garden pots, the first week or fortnight.

When the plants shoot into stalks a foot or two long, those near walls may be nailed thereto in a spreading order, or trained in the same manner to stakes. They will extend several feet in length, and produce fruit in August and September, in large bunches, ripening in September and October ; and may then be gathered as wanted : and some late fruit gathered in October, and hung up in the bunches in a warm room, for use in November, &c. or some may be gathered, both when green and ripe, to pickle.

To save seed, gather some of the ripest fruit in Autumn, clear out the seed, wash and dry it thoroughly, then put up in paper bags, &c.

M A R J O R A M.

SWEET, or SUMMER MARJORAM,
POT MARJORAM,
WINTER MARJORAM.

THE Marjorams are annual and perennial pot-herbs, of a sweet aromatic flavour, raised, the sweet or annual kind, from seed every Spring, the others by dividing or slipping the off-sets of the roots, and occasionally by seed ; and the plants of the two latter continue of several years duration. All the sorts are used as pot-herbs ; the young tops and leaves together are the parts used, in Summer in their growing state, and dried to keep for Winter.

The Sweet, or annual Marjoram, is raised from seed every Spring. Sow it in April, in a bed or border of light earth, and rake in the seed ; or some in a hot-bed. When the plants are one, two or three inches high, thin the seed-bed five or six inches asunder : those thinned out, plant at the same distance, and watered ; they will

will all be of proper growth the same Summer and Autumn, and to gather to dry for Winter

The two perennial marjorams are also raised by seed, as above; or propagated or raised by slips of or parting the roots and tops together, in March and April, or in September, and planted in a bed or border a foot apart, and watered; they will soon grow stocky in bunches, furnish green tops and leaves all Summer and Autumn, and in the Winter Marjoram, continue green all the year. Some of each may be dried in Summer, to keep for Winter. The same plants, in both sorts, will continue several years.

M I N T.

COMMON, or SPEAR-MINT,

Narrow-leaved,

Broad leaved,

Round leaved;

PEPPER-MINT.

THE Mints are hardy perennial-rooted plants of aromatic property, raised by parting the roots, young off-set plants, and cuttings of the stalks, continuing by the roots several years, producing leafy tops and stalks annually in Spring and Summer, which are the parts used both young, and at full growth, in the Spear-Mint, for sauce, fallads, and culinary purposes, in Spring, Summer, and Autumn, and dried to keep for Winter. And the Pepper-mint principally for distilling, when at full growth in Summer.

They are all raised both by parting the roots in the Spring or Autumn, placing them in drills drawn an inch or two deep, and six inches apart, and earthed over; and by young off-set plants in the Spring, about March and April, when three to five or six inches high, drawing them up with roots, and planted by dibble six inches distance; also by cuttings of the advanced stalks in May and June, in showery weather, cut into lengths of five or six inches, planted six inches apart,

give

give water, and they will soon emit roots freely. And thus, by either of these different methods of propagation, the plants will most readily grow proper for use the same season, both in their young and advanced state, and will acquire full growth in June and July, to cut for drying and distilling.

The Spear-mint may be gathered for use, both in its young Spring tops, of one, two or three, to four or six inches, and in their advanced growth; and in Summer, when coming into flower, gather them to dry for Winter.

If young Spear-mint is required in Winter, or early in Spring, plant some roots thickly in a hot-bed, and they will produce plentifully.

The Pepper-mint for distilling should be gathered in June or July, when at full growth, beginning to flower, being then in best perfection.

M A R I G O L D.

OFFICINAL, or POT-MARIGOLD.

THE Marigold is an annual plant, raised from seed every year in Spring or Autumn, one small crop annually; the plants producing many large flowers in Summer, till October or November, these are the parts used, chiefly to put in broth, and for some medicinal uses; obtained in Summer and Autumn from the plants, and may be dried to keep for Winter.

Sow the seed in any of the Spring months, either in drills a foot apart, or broad cast and rake in the seed; and when the plants are of two or three inches growth, thin them a foot or fifteen inches asunder; or some may be transplanted that distance. Keep them clean from weeds; they will produce flowers the same year, in June, July and August, and till the end of Autumn, to gather for use as then wanted; and gather a supply when in full flower, to dry, then put up in paper bags for Winter.

To save seed, the flowering plants furnish plenty in Autumn; or from scattered seeds, falling from the plants, many young ones will come up naturally in the Spring.

M U S T A R D.

WHITE MUSTARD,
BLACK MUSTARD.

THE Mustards are hardy annual plants, raised from seed every month, in Spring and Summer, the white sort, for a small salad herb; and which and the black mustard in one crop, sowed in the Spring, to produce seed for making flour of mustard, or for sowing, &c.

The white mustard is raised in gardens, as one of the small-salad herbs, in assemblage with cresses, &c. for its warm quality, both for Spring, Summer and Winter salads, or as required; and for which, in Spring and Summer, should be sowed once a week or fortnight, as the plants soon grow too large, for they should be gathered for this purpose while in the seed-leaves, as, after the rough leaves advance, they eat hot, rank, and disagreeable. It may be sowed in warm borders in February and March, afterwards in any other situation; generally sowing in flat shallow drills three or four inches apart, the seed sowed very thick, and thinly covered in with earth. If required in Winter, sow in frames, or under hand-glasses, and on hot-beds when cold or frosty weather.—See as directed for *Cresses*.

To raise a crop for the seed, with which to make flour of mustard, sow principally the black sort, or occasionally the white, in March or April, in open compartments, and in fields. Sowed broad-cast, and rake or harrow in the seed; and when the plants are of two or three inches growth, hoe and thin them five or six inches asunder, cutting up all weeds: or may be sowed

in drills a foot asunder ; they will shoot to stalk, and ripen the seed in July or August.

To save seed of the white mustard for sallading, either sow some in March, &c. or leave rows of the crops of that season, that are become too old for use ; they will shoot, and produce seed in Autumn.

NASTURTIIUM, or INDIAN CRESS.

MAJOR or GREATER NASTURTIIUM,
MINOR or DWARF NASTURTIIUM.

THE Nasturtiums are tenderish annual plants, raised from seed in one small crop every Spring ; and in the first sort, the plants run with long trailing stalks, the other of dwarfish growth, each furnishing leaves, flowers and berries, in Summer and Autumn, which are the parts used ; the young leaves and flowers sometimes used in sallads for their warm relish, similar to cresses, the flowers also to garnish sallads, dishes, &c. and the green berries to pickle.

The large sort should either be sowed near walls, pales, hedges, rails, &c. on which to train them in their trailing growth ; or in open compartments, and have sticks placed for their support, though they will also succeed by trailing on the ground.

They should be sowed in March or April, or May, in a drill under a wall, hedge, &c. or if in open or detached situations, sow them in rows three or four feet asunder. Sow the seed in the drills three or four inches apart, and earthed over. When the plants begin to run, those near walls, rails, hedges, &c. should be trained thereto ; or others, that are distant in open spaces, have branchy sticks placed to each row, on which to conduct the plants. They will run several feet in length, flowering at the joints, and produce abundance of berry-like seed, for gathering green as required in Autumn.

The small nasturtium may be sowed in the same manner, or in patches.

To save seed, the plants produce it ripe abundantly in August and September.

MELON or MUSHROOM. See the Appendix.

O N I O N.

COMMON, or STRASBURGH ONION,

DEPTFORD ONION,

LARGE PORTUGAL ONION,

LARGE SPANISH ONION,

LARGE SILVER-SKINNED,

SMALL EARLY SILVER-SKINNED,

(for pickling)

BLOOD-RED ONION,

WELCH ONION, or SCALLION,

(not bulbing).

ONIONS are all biennial plants, the Welch onion perennial in root; all raised from seed every year in the Spring for the principal crops, and in Autumn to stand for young Winter and Spring onions; useful in their different stages of growth, both in their young green state, and when advanced less or more in their bulbous nature, but of greatest value when fully bulbed in July and August, both for present supply, and to gather for keeping till Winter and Spring, continuing in good perfection many months; and therefore should always be cultivated plentifully for a principal crop, as being very desirable at all seasons for the supply of a family, and most useful in various culinary purposes, as well as to eat raw occasionally, in their different states of growth.

The main crops are sowed in the Spring, end of February or in March, not later than the beginning or middle of April. Allow them some best ground in an open compartment, and if well manured with rotten dung, it will be of much advantage. The ground may either be laid out in four feet or four and a half wide beds, or remain in a continued plat. Sow the seed moderately thick, broad-cast on the surface, and raked in

in evenly : the plants to remain where sowed, and when advanced three or four inches in growth, in May and June, the main crops designed to stand for full bulbing, should be thinned and cleared from weeds, performed either by hand, or small hoeing with a small one-hand hoe two inches broad ; or in want of an hoe, have an old table-knife, bent an inch and a half at the end ; thinning out the onions about four or five inches apart, and cut up all weeds. After this, in the advancing growth of the plants, keep them very clear from weeds, by occasional hoeing, or pulling the weeds up according as they appear. The plants will continue in advancing growth till August, when they will be fully grown in large bulbous roots, which, when the leaves begin to decay, having then done growing, should be pulled up, spread to dry, then housed for keeping.

But, besides the above main crop of bulbous, some may be raised to remain thick for drawing young for use, in a thinning order, both in their small unbulbed state, and in their advancing young bulbous growth, thinning them out regularly as wanted, in June, July, &c. leaving a crop at least four, five, or six inches asunder, for bulbing to a full size in August.

Likewise some may be sowed in April, in poor ground, to remain thickish, to produce small bulbs for pickling.

Or, if young onions are required all Summer, &c. some seed may be sowed in April, May, and June, till July.

According as those for full bulbing attain mature growth towards the middle of August, when the necks shrink and fall, and the leaves decaying, pull them up, spread them on a clean dry compartment of ground in the sun to harden, turning them over once in two or three days ; and in a week or fortnight they will be proper to house. Clear them from earth, and the roughest parts of the leaves and stalks ; carry them into some dry room, laid thinly at first, turning them over occasionally, and pick out any that discover a decaying

state. When they are full dried and hardened, they may be laid closer, or thicker together, if required. They will thus keep good all winter, &c.

To raise a crop of Winter and Spring young onions, and for early bulbers, the seed should be sowed in August and beginning of September; and for which crop, it is proper to sow a principal supply of Welch onions, which, although they never bulb, have merit for their singular hardiness to stand the rigours of Winter, when the bulbous sorts are often killed, in that season: but they are of a stronger hot taste than the bulbous onions:—and of the latter, what are not used in their young growth will come in for early bulbing onions in June and July, though will mostly soon after run up for seed.

However, it is proper to sow both sorts, some towards the middle of August, and a few more about the latter end of that month, or beginning of September, to stand later in the Spring without running.

Sow each sort separate, in four-feet wide beds, tolerably thick; tread down and rake in the seed. When the plants are up one, two, or three inches high, and weeds rising numerously, they must be carefully hand-weeded, not thinned; as this will be effected in drawing them young for use as wanted, for sallads and other occasions; and for which, some of the first sowing in August may be drawn the same season, in October, November and December. The main supply remain till Spring; but in Mid-winter, as the Welch onions commonly die down to the ground, the root-part remains, and they come up again strongly in February, at which time, and in March, let the whole be well cleared from weeds. The onions will be of proper growth to draw green for use all the Spring months, till May; then let some of the bulbous kinds be thinned, to remain for early bulbing in June and July.

Of the bulbous kinds, of the winter crop, some may be thinned out in April, and planted in rows six inches distance,

distance, and watered, they will bulb of a tolerable good size.

To save onion seed, take some of the finest of the housed dried bulbs in February, plant them in rows three together, eighteen inches apart, and a foot distance in the row; having an interval of two feet between each three rows, to admit of placing stakes to support the seed-stems of the plants in Summer; they will ripen seed in August or September.

P A R S L E Y.

COMMON PLAIN LEAVED

CURLED LEAVED PARSLEY

BROAD LEAVED, OR LARGE ROOTED HAMBURGH PARSLEY, (*for its Root*).

THE varieties of parsley are biennial plants, raised from seed every Spring in one crop, which in the common and curled leaved, the leaves are the only parts used, produced at all seasons of the year, and in the broad-leaved, or Hamburgh parsley, it producing large white carrot-shaped roots, these are the parts chiefly used, attaining perfection in Autumn and Winter, when they are boiled to eat like carrots, &c. good disorders of the gravel.

The first two sorts of parsley are proper to cultivate in every garden as most useful pot herbs; the seed may be sowed in any of the Spring months, from February till May, one crop will be sufficient to furnish a supply of leaves all the year; sow it either in a single drill along the edges of borders or other compartments, or for larger supplies, may be sowed in continued rows nine inches asunder; draw small drills half an inch to an inch deep, sow the seed moderately thick, and covered in about half an inch deep with earth; the plants will come up in three, four, or five weeks, to remain where sowed, weeded occasionally; and when of two or three inches growth, may begin to gather the leaves for use, and as wanted,

all Summer and Winter, and following Spring, till May, when they will go to seed, having a fresh crop sowed every Spring, as above, advancing to succeed the old plants.

The broad-leaved parsley, for its root, should be sowed in February, March, or April, in beds, broadcast and raked in, or in small drills nine inches apart; the plants to remain, and thinned six or eight inches distance; the roots will grow to proper size to take up for use, in August, September, and October, and remain good all Winter, and part of the following Spring.

To save parsley seed, permit some rows of old plants to run to stalks in May, they will produce great plenty of seed in Autumn.

P A R S N E P.

COMMON SWELLING PARSNEP.

THE parsnep is a biennial large eatable-rooted plant, raised from seed every Spring in one main crop, the plants to remain, and thinned, and will grow to full size in the root in Autumn, very long and large by October, proper for use in that season, all Winter, and following Spring, very deserving of principal culture in every garden, in considerable supplies, being a very good and profitable root in a family.

For its culture, allot a compartment of the richest light deep ground, which will dig two spades or one full spade deep.

Sow the seed generally about the latter-end of February, or in March, not later than the beginning or middle of April, either in four or five feet wide beds, or in a continued space, broadcast on the rough surface, and rake in the seed regularly; the plants to remain, and when two or three inches high, thin and clear them from weeds in May or June, either by hand or small-hoeing, thinning the plants six to eight or ten inches distance, and eradicate all weeds; afterwards keeping them

them clean from weeds till the leaves cover the ground, and no more culture will be required; the roots will be grown large for use by October, and be arrived to full growth by the end of that month, and remain good till next April.

But in the beginning of November, when the leaves decay, a quantity may be digged up, the tops cut off, and the roots then laid in sand, under cover, for ready use in Winter, when frosty weather.

To save seed, leave, or transplant some largest roots in February two feet asunder, inserted over the crowns, they will shoot and ripen seed in Autumn.

P E A S.

Early Dwarf Pea	Grey Rouncival
Leadman's Dwarf	White Rouncival
Early Hotspur	Blue Rouncival
Early Golden Hotspur	Spanish Moratto
Early Charlton Hotspur	Green Nonpareil
Long or Reading Hotspur	Large Egg Pea
Ornrod Hotspur	Pearl Pea
Dwarf Marrowfat	Tall crooked Sugar Pea
Tall Marrowfat	Dwarf Sugar Pea
Green Marrowfat	Rose or Crown Pea; bearing the flowers and pods in a cluster at top.

PE A S are annual plants, raised from the seed, sowed every year in several crops, or every month, from October or November, till April or May, for early and principal crops, and June and July for late production, and in all of which the plants to remain where sowed, producing pods for gathering from May or June, till September or October; very eligible and profitable to cultivate in full crops for the service of a family, and for supply of the markets.

In the different varieties of peas, the hot-spurs are of the smaller kinds, but of the earliest production, and great bearers eligible to sow for the early and first main crops, or in continuance, and next to these the marrow-fats should be cultivated in principal supplies as most fine large sweet eating peas, and for greater variety, may sow some of the other large kinds, as the rouncivals, Spanish moratto, &c. Where there is good scope of ground, any of the sorts may be cultivated; but in moderate gardens three or four of the principal kinds above mentioned may be sufficient, sowed at different times, to have a regular succession; that, if required, as early as possible, some hotspurs may be sowed in October or November, and December, to stand over the Winter to produce in May or June, and for principal early and main crops of these sorts, sow in January, February, March, and April, and of the marrowfats, may sow some in December or January in open weather, but full crops in February, March, and April, and in May and June for succession and late crops; any of the other large sorts may be sowed in February or March, till May, and the same of any varieties required.

For early crops, the golden and Charlton hotspurs are very proper; and if designed to try to have some as early as possible, a small crop may be sowed in a warm border the latter end of October, or any time in November, sow also a few in December, in case the others should be cut off in Winter, these coming up later may stand, and if they all survive the frost, they will succeed one another in bearing.

Draw drills two feet and a half asunder, and an inch deep, sow the peas tolerably thick at this season, and earth them over, or a drill may also be sowed close to a warm wall long-ways; when the plants come up an inch or two high, hoe a little fine earth up to them in a dry mild day, and as they advance in growth in the Spring, draw a little more earth up to their stems; and when six inches high, place some branchy sticks to each row for the plants to climb upon in their natural order of growth, or if they are in a row under a wall, they may be trained close thereto by extending lines along the outside of the plants. In

In their full growth, when in blossom, and the pods setting and filling, if dry weather, watering will be of good advantage, they will produce pods for gathering in May and June.

For succession to the above, or for principal early and first general crops of the same kinds, sow larger portions in December, or January in open weather, and more considerable supplies in February, March, and April, both of the golden or Charltons, and of the long and ormotod hotspurs, which are fine long pods, and good bearers, or the same sorts may be continued in successional sowings every three weeks or a month, from January or February, till April or May, then in smaller crops once a fortnight, till the end of July, all sowed in drills, two feet and a half to a yard distance, or three feet and a half, those intended for sticking; and which different sowings will produce a regular succession from June till September, but in best perfection in June and July to the middle of August.

The marrowfats may be sowed a moderate portion in December or January, in mild weather, larger and full crops in February, March, and April; and may continue sowing in May and June, once a fortnight, or three weeks, drawing drills for these sorts four feet apart, if designed to allow them sticks to climb upon; or if no sticks are intended, three feet asunder, sowing these large kinds moderately thin in the drills, and earth them over evenly; they will bear in these different crops from about the middle or latter-end of June, in regular succession till September.

The rouncivals, Spanish moratto, and other large kinds may be sowed in full crops in February, March, and April, smaller supplies in May and June; in drills the distance advised for the marrowfats.

According as the peas in general of the different crops advance in growth, one or two to three or four inches, hoe the ground between the rows to kill weeds, and to loosen earth about the plants, and hoe some earth up to their stems, and those designed for sticking, should have the sticks placed to each row when they are

six to eight or ten inches high, just as they begin to put forth their tendrils for climbing; having, for the smaller peas, as hotspurs, &c. sticks of four or five feet, and for the marrowfats and other large kinds, those of six or seven feet high, or more, will be requisite; place a row to each line of peas, generally on the most sunny side, that the sun may incline the plants more effectually towards the sticks; they will soon attach themselves, and ascend without further trouble; and bear more abundantly, and in longer continuance than those not sticked.

For latest crops of peas in Autumn, some hotspurs may be sowed in July, and beginning of August, to have a chance of moderate crops continued to the end of September, and in October.

Also sow some Leadman's dwarf, very small, but sweet peas, and great bearers; they may be sowed any time in Spring and Summer, and very proper for a late crop to sow in June, July and August.

Peas are obtained early, by sowing in hot-beds in January and February, or rather some young early pea plants previously raised by sowing in November or December, in warm borders, or under frames, &c. or in a small hot-bed, till advanced an inch or two high, and then transplanted into hot-beds, defended with frames and glasses, will sometimes produce a few peas in March and April, and beginning of May; or sow or plant in the borders of forcing houses, and in pots placed therein, or in a stove.

To save peas for seed, either sow some in Spring to stand wholly for that occasion, or leave some rows of the main crops ungathered; they will ripen in August.

POTATOES.

P O T A T O E S.

Early Dwarf
Round Red
Oblong Red
Round White

Oblong White
White Kidney shaped
Large Red-nosed Kidney
Red Apple Potatoe.

THE potatoes are hardy perennial-rooted plants, or the root rather annual, and perpetuated and propagated by off-sets every year, planted in the Spring, and each multiplies in Summer into a large cluster of round or oblong tuberous fleshy roots or potatoes, obtaining a small size for use in June or July, considerably larger in August and September, and arrive to full growth the end of October, to be digged up wholly to house, and keep all Winter and following Spring, exceedingly profitable and most useful roots, obtained plentiful almost the year round; good to boil, bake, roast, and for puddings, and various other very serviceable uses, more than most other kitchen vegetables.

They are propagated and raised either by planting small or middling roots whole, or principally by planting cuttings of the roots, *i. e.* the potatoes, large ones, cut into three, four, or more pieces, for sets, each furnished with one or two eyes, from whence they emit roots, &c. and planted in the Spring, either in deep drills, or with a large dibble, and each set multiplies into many whole potatoes, as before intimated.

Any of the sorts are proper to plant. The large round reds are very fine, though at present scarcely seen in the London markets. The round and large oblong whites are preferred by the cultivators, as being supposed to be rather more prolific than the reds.

They should have a lightish rich mellow ground; or if of a sandy loamy nature, it will be an advantage; and if some lightish or moderately rotted dung is digged or plowed in, it will prove an additional improvement to the soil and crop.

The

The season for planting is March and April, when, having procured a quantity of middling large potatoes, cut them into three, four, or more pieces, with one or two eyes to each set: then, as to the method of planting, it is sometimes performed by dibble, having it thick and blunt-ended, and with which make a hole for each set, four or five inches deep, and a foot to fifteen or eighteen inches distance in the row, dropping a set in each hole, and strike the earth in upon them, the rows two feet or two and a half asunder. Or another method is, to draw large drills, four or five inches deep, with an hoe or plough: place the sets in the drills, and earth them over. And in field-planting, it is sometimes effected by placing the sets in the furrow after the plough, as the ground is plowed, turning the earth of the succeeding furrow in upon the sets, allowing the distance as above between the rows.

The plants will come up in May; but sometimes, before their appearance, numerous weeds will advance, in which case it is proper to run over the ground, between the rows, with a common broad hoe, or Dutch hoe, being careful to observe, if the potatoe shoots are advanced near the surface, not to cut them; however, when they are up, give a good hoeing in dry weather, cutting up all weeds, and stir the ground about the plants, which repeat once or twice, as weeds appear; and when the potatoes are advanced a foot high, may hoe up some earth to the bottom of the stems, to strengthen their growth, and promote the encrease below. Sometimes, in large field-crops, the hoeing is performed with an horse-hoe, for greater expedition.

The plants will encrease in the root, each set to many potatoes in a cluster, which, in the early or first-planted crops, will sometimes be advanced to proper size, in June and July, to begin taking up a few in their young growth for present eating, only however a small portion at a time as wanted, as they will not keep good above a day or two: but in August and September will be encreased to a moderate good size, and may be taken up in large supplies, though not yet for keeping

ing any long time; permitting the main crops to continue in growth till the end of October, when the roots will be fully grown, and should be wholly dugged up to house for Winter and Spring.

In the latter end of October, or beginning of November, the potatoes being of full growth, and the stalks decaying, they should be all taken up before frost sets in. Generally, for this business, have a proper potatoe-fork, of three or four flat shortish tines, and fixed on a spade-handle: cut down the stalks, and with the fork dig the roots clean up, large and small; but in considerable field crops, they are sometimes turned up with the plough.

According as they are taken up, house them in some dry close apartment, and if mixed with dry sand, they will keep the better. They may be laid close, or heaped up thick together, and covered thick with clean straw, to exclude the air and damps.

Early potatoes are obtained occasionally by planting dwarf kinds in a hot-bed in January and February.

Potatoes are sometimes raised from seed, to obtain new varieties, or renew the degenerated sorts. They produce seed in Autumn, in small round fruit produced on the stalks, ripening in October, when being gathered, preserve the seed till Spring: then sow it thinly, in small drills a foot asunder; and when the plants are up, thin them six inches distance, to grow till the end of October, when the roots should be taken up, and a proper supply of the approved new sorts reserved for planting in the Spring.

P E N N Y R O Y A L.

PENNYROYAL is a small perennial plant, an aromatic pot-herb, propagated plentifully by parting the roots and slips of its creeping rooting shoots. One small crop planted lasts several years, producing small, tender, leafy shoots, in Spring and Summer, &c. which are the parts used, both in its green state, and to dry for Winter.

It

It may be planted in any of the Spring or Summer months, or in September or October, when either slip or divide the roots, or take up some rooted shoots; plant them a foot asunder, in any bed or border, or where most convenient; they will quickly grow, overspread the surface, and remain several years.

The young shoots are gathered for use as wanted, and to distil for pennyroyal water. Gather also some in June, July, or August, to dry, to keep for Winter.

P U R S L A N E.

GREEN PURSLANE,
GOLDEN PURSLANE.

PURSLANE is a small tender annual plant, a salad and pot-herb, raised from seed in the Spring, in a hot-bed or warm border, in two, three, or more small crops, as may be required, as the plants soon go to seed the same season, producing short succulent shoots and fleshy leaves, which are the parts used; cut for use in their young growth.

The plants are raised from seed in any of the Spring months. An early crop may be sowed in February or March, in a moderate hot-bed, as the seed and plants are too tender to grow in the open ground before April, but in that month and May some may be sowed in a warm border; and if a constant supply of young is required all Summer and Autumn, sow some every month till August. Either sow in small drills four inches asunder, or on the surface, and spread each over, or rake in the seed. The plants to remain where sowed.

When the shoots of the plants are two or three to four or five inches high, and furnished with leaves, they are proper to gather for use: cutting them off low, they will shoot out again.

To save seed, leave some plants to run; they will ripen seed in Autumn.

R A P E.

R A P E.

RAPE is an annual plant, cultivated in gardens as a small sallad herb, raised from seed in the Spring and Summer, &c. by sowing two or three times every month, to have the plants young in constant supply, to gather quite young while in the seed-leaves, which, being of a warm relish, are used in sallads with cresses, mustard, &c. And the plants are also cultivated in fields, to attain large growth for feeding cattle, and to produce seed for rape-oil.

As a small sallad herb, it is commonly sowed along with cresses, mustard, &c. each sort separate, in the Spring and Summer, or at any time of the year when small sallading is required; sowing two or three times a month, or oftener, to have it always quite young.—In the manner directed for *Cresses*, &c.

To raise the plants in full growth in fields for cattle, and the seed for oil, the crop is sowed about the middle of June, or in July; broad-cast over the whole ground. The plants to remain, and hoed ten or twelve inches distance, to grow large for Winter and Spring; then may be fed off as required, and what remains will run, and produce a large crop of seed in Autumn.

R A M P I O N.

THE Rampion is a biennial plant, producing a small eatable root, and oblong oval leaves, raised every year from seed in the Spring and Summer, and the roots attain perfection for use in Autumn and Winter, continuing good till the Spring.

One or two small crops may be raised for variety at table, as may be required. Sow the seed in March or April, in a shady border, broad-cast and raked in. The plants to remain where sowed, and when an inch or two high, thin them four or five inches distance. Keep them clean from weeds, and in Autumn and Winter the

the plants will be proper to draw for use as wanted, and continue good till April or May following.

To save seed, leave some old plants in Spring to run : they will produce seed to gather in Autumn.

R A D I S H.

Early Short-top	rooted Radish
Early Dwarf Red	Red Italian Turnep-rooted Radish
Common Short-top	Black Spanish Turnep-rooted Radish
Early Dwarf Salmon Radish	White Spanish Turnep-rooted Radish
Common Salmon Radish	
White long Radish	
White Italian Turnep-	

RADISHES are all annual plants, raised from seed every year in Spring and Summer, or sowed every month, from January, February, or March, till May or June, or till August or September, when required in long succession : the plants all to remain where sowed, and moderately thinned. The root, the principal useful part, attains perfection for eating in March and April, May and June, and is continued by late sowings all Summer and Autumn, till November ; and the black Spanish radish large and hardy roots, continue throughout the Winter. Likewise radishes raised thick in young plants, in the seed-leaves, are also used as small-sallad herbs, with cresses, mustard, &c. in Spring, Summer, and at all times of the year, when required.

Crops of radishes for their roots, are raised for early and principal supplies, by sowing on warm borders in January and February ; and in any open situation in March, till April and May, to draw for eating in March and April, till June ; or may be obtained early, by sowing in hot-beds in January and February, and large crops by sowing in June and July, in any open compartments ; or by sowing in August and September, may have them for use all September and October, till November, &c. However, the principal season of radishes

ishes is April, May, and beginning of June, from the Spring sowings.

For the principal early and main crops, the common spindle-rooted radishes are most generally raised; but some of the turnep-rooted kinds are very deserving of culture, particularly the white Italian sort, both for Spring, Summer, and Autumn crops; and the black Spanish turnep-radish for the end of Autumn and all Winter.

Radishes are raised in early crops, both by sowing in the natural ground on warm borders, &c. and in hot-beds.

To raise early natural-ground crops, a few may be sowed in December, in a dry warm border; a larger portion in January and beginning of February. And for all of which have seed of the early short-top kinds: sow it broad-cast on the surface, moderately thick at this early season, and rake it well into the ground; or if sowed in four or five-feet wide beds, with foot-wide alleys between, may also spread some of the loose earth out of the alleys over the beds, to cover the seed more effectually. As soon as sowed, cover the ground with clean dry straw, two or three inches thick, both to keep off birds, and to keep the surface warm to forward the growth of the seed. The covering to continue till the plants come up, then raked off every morning in mild open weather, and forked over again in the evening, and in frosty weather to remain constantly night and day; continuing this care till March, or occasionally in that month, if severe weather should prevail, as is often the case. Afterwards, when they are advanced in the rough leaves, and no danger of much frost happening, wholly discontinue the covering. The radishes will come in for drawing in the middle or end of March, or in April, when, if dry warm weather, give occasional waterings.

Early radishes, by hot-beds, are obtained by sowing some early dwarf sorts in January, and beginning of February, making a hot-bed of horse-stable dung for one or more two or three-light garden frames of the shallowest

shallowest kinds ; the bed made two feet, or two and a half high in dung. Earth it at top six or eight inches, sow the seed, and sift or cover it with fine earth half an inch thick ; put on the glasses, and when the radishes come up, admit air every mild day, by propping up the lights two or three inches behind, that the plants may not draw up long-shanked ; and if the plants are very thick, thin them one or two inches distance. In cold nights, defend the glasses with straw or mats, or occasionally of days when severe frost ; but in mild weather, give plenty of air, and sometimes in fine dry days, in the advanced growth of the plants, draw the glasses off, but put on again towards the evening, and give necessary waterings : they will come in for drawing in February and March.

For general crops of radishes, begin sowing in any beds, borders, and open compartments, about the middle or latter end of February, and continued in March, April, and May, once a fortnight or three weeks. Sow broad-cast on the general surface, moderately thin, and rake in the seed ; or sometimes, with these crops, may mix some round spinach seed, to come in after the radishes are drawn off in April and May, &c. observing, when the radishes come up, if they are too thick, thin them somewhat regular, two or three inches distance.

Late crops may be sowed in April, May, and June, both of the common red and salmon radish. The latter is very proper to be sowed at that season, and comes in for a fine Summer radish ; or later crops may be sowed in July, August, and September, as before observed.

The turnep-rooted radishes of the small white Italian sort, and also the red, may be sowed in any of the Spring months, &c. from February or March, till May or June, for Spring or Summer eating, and in July, August and September for Autumn ; thinning the plants five or six inches asunder. Or to have them earlier, they may be sowed in a hot-bed in February, as directed for the Short-tops.

The.

The black Spanish turnep-rooted radish, growing very large, like a middling turnep, is commonly cultivated for Winter, being very hardy, and of a strong warm flavour; but it may also be raised for Autumn, by sowing in the latter end of June, or in July, and a principal crop in August, and beginning of September, to stand for Winter: thinning the plants in their young growth six to eight or ten inches distance.

To save radish seed, draw up a quantity of the main crops in May, in showery weather; select the finest, straight, well coloured roots, with shortest tops, and plant them two feet apart, and watered; they will shoot and produce ripe seed in September.

And of the black Spanish radish may either sow some in Spring to stand for seed, or leave or transplant some large roots of the Winter standing crop in the Spring.

R O C A M B O L E.

THE Rocambole is a perennial bulbous-rooted plant, of the family of garlick, and similar growth and quality, but the root smaller, which is the useful part, as also the head of small cloves at top of the stalks; raised like the garlick, by planting the small cloves of the root and head in the Spring, growing to full size, for use, in July, and to dry and keep for Winter, &c.

It is planted in February or March, having some separated cloves of the root or head, plant them in drills, or by dibble, six inches apart, and two or three deep; they will shoot up each with a tall slender stalk, contorted at top, producing a small head of cloves, which, and the root, will be of full growth in July or August, when take them up, spread to dry, then tied in bunches and housed; they will keep good till next Spring and Summer.

They are used occasionally for the same purposes as garlick, and for medicinal use.

S A L S A F Y.

S A L S A F Y.

SALSIFY is a hardy biennial plant, with a long white fleshy eatable root for boiling; raised from seed in the Spring; the plants remain where sowed, and thinned; they shoot at top with long narrow leaves, and the root runs down long and straight, attaining full growth in Autumn, for use in that season and all Winter; and in the Spring, the year old plants, shooting up with thick fleshy stalks, these are sometimes gathered young to boil, and eat like asparagus: the roots also to boil.

Sow the seed, a small or moderate crop, in March and April in an open situation, either broad-cast, or in small drills six or eight inches distance; and when the plants are up two or three inches, thin them half a foot apart; continuing in growth till August, September, or October, when some roots may be dug up as wanted; and the rest will remain good all Winter till they shoot in the Spring.

To save seed, leave some old plants in Spring; they will shoot up stalks, and furnish seed in Autumn.

SAVOY, or SAVOY CABBAGE.

GREEN CURLED SAVOY,
YELLOW SAVOY,
ROUND SAVOY,
SUGAR-LOAF SAVOY.

SAVOYS are of the heading cabbage-tribe, biennial plants, raised from seed annually, in the Spring and beginning of Summer; all for transplanting in Summer and Autumn, two or three feet distance; grows to full cabbaged heads the same year, to cut for use some in September, or October, and the principal crop, for Winter supply, till February and March, then goes to seed; are very useful and profitable to cultivate

cultivate in large crops, for principal Winter cabbage greens.

Of the different varieties of favoys, there are some with round, oblong, and sugar-loaf heads, though mostly of the round; the others accidental; all the sorts are good: but the green favoy is hardiest to stand the Winter, and rather preferable to the yellow and white for eating; however, it is proper to have some of each.

The seed is sowed principally in the Spring, or in three different sowings, from February or March, till May, for planting out at different times in Summer and Autumn, from May and June, till the beginning or middle of September; sow a small crop in February to plant out for early Autumn favoys cabbaged in August or September; sow a larger supply about the middle of March, for a first principal Autumn and Winter crop, and sow a full crop in April for a main crop of Winter favoys: also for some to stand later in the Spring, or for favoy coleworts, a small quantity may be sowed in May; all generally sowed in open compartments to the free air, that the plants may not draw up long-shanked; sow them in any open border, or in four feet wide beds, on the surface, and rake in the seed; when the plants are up two or three inches, thin the seed beds, and those draw out, prick in other beds four inches distance, and watered; to remain three, four, or five weeks, to obtain good strength, as well as those in the seed-beds for final transplanting.

Then when the plants, both in the seed-beds and pricked-out-beds, are advanced with several leaves three inches broad, or more; transplant them into the most open quarters of ground, where they may be less annoyed by caterpillars, and that they may cabbage with large full heads: planting them at different times as ground becomes vacant, some in May for early Autumn headings; but plant the principal crops in June, July, and beginning or middle of August; taking all possible opportunities of showering weather, when it happens; and plant them two feet and half distance those in May,
June,

June, and July, the others two feet ; and in September a late crop may be planted of the last sowed plants, two feet by eighteen inches distance, to furnish small heads in Spring, continuing a little longer than the others before they run in that season.

According as the plants of the different transplantings proceed in their growth, keep them clear from weeds by occasional hoeing, and at the same time draw earth about the bottom of the stems of the plants once or twice in their advancing state, to encourage their growing strong to produce large close heads of full growth by September, October, November, &c. in the different crops.

They will be of proper cabbaged growth to begin gathering some in September ; but in the main crops, will be in full perfection in October, November, and December, continuing good till the middle or end of February, when, or beginning of March, they will open and all fly up to seed.

To save seed of favoys, dig up some finest full-headed plants in November or December, or any time in open weather till February, pull away the large under leaves ; then trench them down to the heads in rows two feet distance : they will shoot and produce seed in July or August.

S C O R Z O N E R A.

THE Scorzonera is a hardy biennial plant, with a long fleshy tap root, the eatable part, raised from seed sowed annually in the Spring, the plants to remain, and thinned ; attain full growth in Autumn, for use in that season and all Winter :—generally used for boiling.

Sow the seed in March or April, and in May, in light ground, either broad-cast and raked in evenly, or in small drills ten or twelve inches distance, and earthed over half an inch deep, and when the plants are up two or three inches, thin them six or eight inches asunder, and clear out all weeds ; and continuing in growth till
Autumn,

Autumn, some may be taken up for use in July, August, or September, but the roots will not acquire full growth till the end of October, when the leaves will decay, then may be taken up for use as wanted, all Winter, or some may be dug up in November, and preserved in sand, under cover, to be ready in frosty weather: they will shoot in Spring, and become unfit for use after March or April.

To save some seed, leave a few old plants to run in the Spring; they will shoot up in tall stems, and ripen seed in Autumn.

S K I R R E T.

THE Skirret is a small perennial rooted plant, with small fingered roots, the eatable parts; raised by seed annually in the Spring, the plants to remain where sowed, and thinned, and occasionally by slips of the roots of old plants, acquiring proper growth in the roots to take up for use in Autumn and Winter, continuing good till Spring, are of a sweetish taste; good for boiling.

It is raised in best perfection in good tender roots, by seed sowed every Spring, a small crop in an open compartment, the middle of March and in April, either in small drills six or eight inches apart, or broad-cast, and rake in the seed; and when the plants are an inch or two in growth, thin those in drills four or five inches distance; they will continue growing till Autumn, when in September or October, the roots may be taken up as wanted, and when the leaves decay, are at full growth, to use all Winter and Spring, till they begin to shoot.

To save seed, permit some old plants to run in the Spring, they will produce seed in Autumn.

Q

SORREL.

S O R R E L.

COMMON LONG-LEAVED,
BROAD-LEAVED,
ROUND-LEAVED CREEPING ROOTED.

THE Sorrels are hardy perennial pot-herbs, esteemed for the acid property of their succulent leaves, raised by seed in the Spring and Summer, one crop either annually, or once in two or three years, both to remain and transplant; and by parting the roots in Spring or Autumn; and, in both of which, the plants continuing several years, produce plenty of leaves for use at most seasons.

To raise them from seed, sow it in any of the Spring months, or beginning of Summer, in a bed or border; when the plants are come up an inch or two in growth, thin them where thick about three inches apart; and when advanced a little stocky, in Summer or Autumn, thin out a quantity in regular order, and plant them in another bed, twelve by six inches asunder, leaving those in the seed-beds the same distance, but double that for the round-leaved creeping sort: keep them clean from weeds; and as they are abiding plants, dig between them every Autumn and Spring.

They are also expeditiously raised by parting the roots in Spring or Autumn; either taking off side off-sets, or full plants divided into separate rooted slips, and planted a foot distance.

As these plants will run up with stalks in Summer, cut them down to increase a production of large leaves below.

Likewise observe, that if the plants in two or three years become of dwindling growth, producing small leaves, they should be renewed by seedling plants.

To save seed, permit some plants to run to stalks all Summer, they will ripen plenty of seed in Autumn.

SPINACH.

S P I N A C H.

ROUND LEAVED, OR SMOOTH SEEDED SPINACH.

TRIANGULAR LEAVED, PRICKLY SEEDED SPINACH.

FRENCH, OR MOUNTAIN SPINACH.

SPINACH is an annual plant, producing large succulent leaves, the useful parts for boiling, &c. raised always from seed sowed every year, several crops in Spring and Summer, for use the same year, and in Autumn to stand the Winter to gather in that season; and for a full Spring crop, the plants all remaining where sowed, and thinned three or four to five or six inches distance, that the leaves may grow large and succulent.

Of the different sorts of spinach the first two above mentioned are those proper to cultivate for the main crop; the other occasionally

The two sorts of common spinach, round and triangular leaved, are generally cultivated at different seasons; the former, growing with largest more fleshy succulent leaves, is commonly sowed in Spring and Summer for young spinach in those seasons, and the triangular sort being less succulent and rather hardiest, is sowed in Autumn to stand the Winter.

For young Spring and Summer spinach, the round-leaved sort is proper; and which for the early and general crops, sow some in January or February, and March, April and May; first in a warm border or quarter, afterwards in any open compartments, all sowed broadcast thinly, and rake in the seed; when the plants are come up with leaves an inch broad, thin and clear them from weeds either by hand, or small hoeing with a two-inch hoe, thinning the plants three or four inches apart; and when advanced in growth, some may be cut out for use in a thinning order to six or eight inches distance,

distance, that the remainder may grow stocky, with large spreading leaves; and in these different crops, the plants will come in for gathering in April, May and June, proper for this when the leaves are from about two or three to four, five, or six inches broad, either cutting the plants whole clean out to the bottom in a thinning manner where close, or sometimes only the large leaves; but as these crops soon go to seed, when this appears they may be cut clean to the bottom as wanted.

As the plants of each crop, of the Spring and Summer sowing, continue but a short time before they fly to seed, it is proper to sow every month from January or February till March, then every three weeks till the beginning of May, when, and in June, sow once a fortnight, all in open situations, otherwise will soon fly to seed, and if required all Summer, continue sowing the same sort till August, managing the whole as directed above.

In sowing Spring spinach in February, March, and April, it may occasionally be sowed on the ground where cauliflowers and cabbages are to be planted in wide rows, to make the most advantage of the ground where necessary; or may sometimes, as above, sow spinach and a thin crop of radishes together, the radishes will be drawn off to give room for the spinach.

Or spinach may be sometimes sowed in drills a foot asunder.

For Winter spinach to stand for use in that season, and for a principal Spring crop till the Spring-sowed plants come in, a good crop should be sowed in August and beginning of September of the triangular-leaved kind; sow a principal crop the first or second week in August, but not later than the third week, as the plants sowed at these times will not run the same year, as is the case with all these sowed before; allot a compartment of good dry-lying ground exposed to the Winter's sun; sow the seed broad-cast, and rake it well into the ground, or may lay the ground out in four or five feet wide

wide beds, with alleys between, sowing the seed in the same manner.

When the plants are up with leaves an inch broad, in September they will want thinning and clearing from weeds, performing it by hand or a small two-inch hoe, thinning the plants about three inches distance, eradicating all weeds: after this, when the spinach is more advanced with leaves two or three inches broad in October and November, some may be thinned out for use where thick, clearing the crop at this time thoroughly from weeds principally by hand, if performed then by hoeing to leave the weeds, they would mostly grow again.

In Winter, if the spinach is advanced in proper growth, some may be gathered in that season, when, take only the large outward leaves, the others will advance in succession for future gathering, and may thus continue gathering in Winter and the early Spring months till March.

But in March and April, when the plants advance to a large growth, they, if too thick, may be thinned, by cutting out the largest plants clear to the bottom; and as in May the whole will run to seed, they may then be all cut clean out as wanted: will be succeeded by the Spring-sowed spinach.

To save spinach seed, leave in the Spring either some of the Autumn-sowed Winter-standing plants, or part of the Spring crops, they will run to stalks, and produce seed in August.

S H A L L O T.

SHALLOT is a small bulbous-rooted plant of the onion tribe, several small roots growing in a bunch; raised by planting the off-sets in the Spring, each multiplying into several small oblong bulbs in a close cluster, of proper growth to take up in July, and to dry and keep for Winter and Spring.

Q 3

They

They are often used instead of onions, as being of a milder agreeable taste, and not so apt to impart a strong flavour after being eaten.

These roots are propagated by planting the off-sets, that is, having some good middling roots separated singly; they may be planted in February or March, not later than the beginning of April, or may be planted in November: allowing them rich ground, in four-feet wide beds; plant them either in drills, or by dibble, or by inserting them between the fingers and thumb two or three inches deep, and six inches asunder: will shoot up in a tuft of slender leaves, and multiply each set, or off-set, into several bulbs in a close cluster, attaining full growth in July when the leaves decay; and should then be taken up, dried, and housed, for present and future use till next year.

T A N S E Y.

COMMON PLANE-LEAVED.

CURLED-LEAVED.

TANSEY is a large growing perennial-rooted plant, of a strong aromatic flavour, the leaves the part used; raised by off-sets or parting the roots; one small crop planted, continue several years, producing leaves for use in Spring and Summer till the end of Autumn; or green leaves may be obtained in Winter, by planting some roots thereof in a hot-bed.

They may be planted in Spring or Autumn, either detaching some side off-sets, or divide the roots into several sets, and planted in any bed or border eighteen inches or two feet asunder; they will encrease into large bunches, of several years continuance, producing large tufts of leaves annually: but as they will shoot up strong stems in Summer, some should be cut down to encrease young leaves below.

If young tansey is required in Winter, plant some roots in a hot-bed.

T A R R A-

TARRAGON.

TARRAGON is a small perennial pot and fallad herb of the aromatic tribe, raised by parting the roots and cuttings of the young stalks in Spring and Summer, one small crop, which will continue several years by the roots, producing shoots and small narrow leaves in Spring till Autumn, which are the parts used, for their high aromatic flavour.

It is planted in the Spring or Summer, either in full plants for immediate supply, if required, or in off set slips; and is propagated by off-sets or by parting the roots in the Spring, and by cuttings of the young shoots in Summer, and planted in beds or borders a foot distance, and watered; they will quickly grow, encrease into bunches, and produce plenty of shoots and leaves the same and every year from Spring till Winter, to gather for use as wanted, the young shoots and leaves together: or some may be gathered in Summer to dry and house for Winter.

When young green tarragon is required in Winter, plant some roots in a hot-bed in that season.

T H Y M E.

COMMON THYME.

LEMON THYME.

THYME is a small under shrubby perennial aromatic pot herb, raised from seed once in two or three years for principal supplies, both to remain and transplant, and occasionally by slips and parting the roots and tops together, multiplies into low bushy plants, green all the year in the young shoots and small leaves, which are the parts used in various culinary purposes.

It is planted in the Spring either in full plants or divided off-sets for present supply; and by seed to raise a principal crop.

Sow

Sow the seed in March or April in a bed or border of light rich earth, either raking the surface smooth, sow the seed, and sift fine earth over it, not more than a quarter of an inch thick; or sow the seed, and rake it in lightly and regular; or some may be sowed in small shallow drills six inches asunder, or in a single drill for an edging: give occasional light waterings when dry warm weather, both before and after the plants come up; keep them very clear from weeds; and when advanced three, four, or five inches in growth in June or July, &c. take opportunity of rain, thin them six inches asunder to remain, and those drawn out plant into other beds the same distance, and watered; or some may be planted in a single row for an edging, set three inches apart; they will all grow freely for use the same year, continue two, three, or more, to gather for use at all seasons, Summer and Winter.

Or a fresh supply may be raised from seed every year or two, to have stronger full plants.

T U R N E P S.

Early Dutch Turnep.

Early Stone.

Common white
round.

Green topped round.

Red topped round.

Yellow Turnep.

Oblong Turnep.

Hardy Russia Turnep.

Red Turnep.

Large Norfolk Turnep.

TURNEPS are annual or biennial plants, with large round orbicular and oblong fleshy eatable roots, of great use for boiling, and may be occasionally eat raw in quite young growth; all the sorts raised from seed every year in several crops, in the principal or most approved kinds, sowed every month from March or April till June, July, or August, all to remain where sowed, and thinned six or eight inches; come in for use the same year to draw in May, June, all Summer, Autumn, and Winter, till Spring, then shoot to stalks, which gathered in young green tops in February and March,

March, &c. are also exceeding good to boil for Spring greens; afterwards the plants run for seed, ripen in Autumn, and then wholly perish.

Of the several varieties of turneps, the best for general culture are the Dutch turneps, both for early and first principal crops. Early Stone, Round White, Greentopped, Red-topped; the three latter also for main crops, or principally the Stone and White Round for gardens; any of the other sorts are also good for culture.

The turneps are very useful and profitable boiling roots to cultivate in large supplies; and may be obtained most part of the year by sowing every month in Spring and Summer; a first sowing in March and April for early turneps in May and June; but those soon sowing up to seed a larger and first principal crop should be sowed the beginning and latter end of May to come in for drawing in July and August; and for the principal Autumn and continuing Winter turneps, sow full crops in June and July; and smaller supplies in the beginning or middle of August for late young crops, and to stand till the latter end of Winter and Spring, for continuing longer in that season before they run considerably; as all the crops standing over the Winter shoot to stalks in February, March, and April; then the roots become hard, stringy, and unfit for boiling and eating.

For the first early crops, sow the Dutch or Early Stone turnep in March and April, moderately, once or twice in each month, as the early crops of these sowings soon fly to seed in Summer. Allot them a free situation and light mellow ground; and while this is fresh digged, sow the seed thinly broad-cast over the general surface, tread it down moderately and then rake it evenly and regular. The plants will soon come up. When they have leaves about an inch broad, hoe and thin them five or six to seven or eight inches distance, cutting or pulling up all weeds: they will then have room for growth, and the roots to attain a proper size in May and June, when, according as wanted, draw

them in a regular thinning order, that the remainder may have room to grow larger.

The next sowing perform in May, twice in that month, for succession to the foregoing, and for first main Summer crops, to continue without running; sowing the seed in the most open situation, regularly and thin, tread down and rake it on equally, and the plants, when an inch or two in growth, to be hoed in dry weather, thinning the plants six to eight or ten inches distance, and cut down all weeds. They will come in for good crops, the end of June and July, and August.

But, for the main Autumn and Winter turneps, sow larger crops in June and July, taking all possible opportunity of rain falling, or, when there is a prospect of showery weather, which is of singular advantage at this season; or at least to sow the seed as soon as the ground is fresh digged or plowed. Sow thin and regular, tread down, and rake in the seed directly; and the plants, when an inch or two in growth, as observed of the others, must be hoed and thinned six to eight or ten inches distance. They will be in good perfection in the roots, for drawing, in August, September, October, and continue good all Winter.

Sow also a late crop in August, the beginning, or not later than the middle or 20th of that month, and the plants thinned six or eight inches; they will apple moderately in the roots by October and November, for young turneps at that season and Winter, or to continue for late Spring supply.

For considerable crops of turneps in fields, the ground is well plowed and harrowed, the seed sowed thin and light-harrowed in, and then rolled with a wooden roller, to close the surface more effectually over the seed; and the plants hoed about eight to ten or twelve inches distance.

In sowing turnep seed in Summer, the weather sometimes proving hot and dry when the plants first come up, are often attacked with the small fly, in their young growth of a few days old, while in the seed-leaves, and
a whole

a whole crop devoured in a day or two; and in which case lose no time, hoe, dig, or harrow the ground, and sow again as soon as possible, but more favourably and successful if rain.

Of the Winter crops of turneps in family gardens, some may be drawn up in November, December, &c. in appearance of frost setting in severe: cut the tops off, and house them in any convenient lower apartment, shed, or cellar, and laid in sand, to be ready for use in frosty weather.

To save turnep seed, either leave some in the Spring, best good roots of the Winter standing crops, or a portion of the Spring sowed crop of the same year, in May or June. Or, to be more certain of good well-shaped roots of the respective sorts, draw up a quantity in November or February, of the best full-grown roots of the main crops; select a supply of the handsomest shaped, and plant them in drills two feet asunder, inserting the bottom fibre properly in the ground, and earth the roots over: they will shoot in Spring and Summer into large branchy stalks, and produce plenty of seed in Autumn.

T H E
G R E E N - H O U S E ;
I T S
U T I L I T Y in G A R D E N I N G , and General P l a n ,
W I T H
A D I S P L A Y of the G R E E N - H O U S E P L A N T S
A N D
M E T H O D O F C U L T U R E .

A GREEN-HOUSE, in gardening, is designed as a Winter residence and conservatory for such tender exotic plants as are natives of warm countries, and unable to endure the open air of this climate in Winter, requiring shelter generally from October till May, or beginning of June; but do not need assistance of artificial heat, as is requisite for the stove or hot-house exotics, at least only occasionally, in very rigorous frosts, when a moderate fire-heat, by means of flues extending within the house, will be necessary, sufficient to resist the frost, and sometimes in very raw cold foggy weather, to expel the damps.

As to the requisite plan and construction of a Green-House, it may be first necessary to remark, that its situation would be most eligible in the Flower Garden, or in the Pleasure Ground, or in some sheltered situation in any garden district where most convenient, and where it may have the whole day's sun; should be constructed

in a uniform ornamental stile, extended long-ways East and West, with the front or glass-work full to the South ; and in dimensions may be from fifteen or twenty to fifty or an hundred feet long, or more, according to the quantity of plants ; and in width ten to fifteen feet, and eight to ten or twelve feet high. The back constructed of brick or stone work ; also the ends, either wholly, or only one-third or half-way up, with the upper part of glass lights ; and the front framed wholly of glass sashes, fitted in narrow frame-work of wood, reaching from the top to within a foot or two of the ground, to admit the sun and light in the fullest degree ; or may also have the ends entirely of glass work, in the same order as the front ; and the top may either be wholly slated, or have glass sashes one-third or half way, in a sloping order from the top of the upright front glasses, to have all possible benefit of the sun in Winter. All the sashes made to slide open, or close, as may be required, to admit air, and exclude it occasionally. Having a principal door, by which to move in and out the plants, either in the middle or at one end, but the former will be most uniform and convenient, and which should be also glass sashed ; or a private smaller door, for common entrance, may be at one or both ends. And is adviseable, in constructing this conservatory, to have a fire-flue carried along the inside next the front, or also along both ends and back wall, singly, or in two returns one over the other, proceeding from a furnace or fire place on the outside, behind or at one end, for the convenience of having moderate fire-heat in severe frosts, and to expel damps in very wet or foggy weather, as before intimated. The roof either wholly, or as far as not in glass sashes, may be either slated, or covered with tiles well pointed with mortar, and the inside under the slating or tiles lathed and plaistered ; the walls also neatly plaistered and white-washed ; and the wood-work, outside and within, painted white in oil-colour ; and the floor paved with brick, or broad paving tiles.

For

For the better security of the plants in severe Winters, light moveable shutters, to put up against the outside of the glasses, would prove very beneficial in cold frosty nights, or occasionally in the day, when the frost is extremely rigorous: or in want of these, large thick garden mats must be used.

Sometimes, in want of green-house room, large garden frames and lights, or a brick-work pit with sloping glasses at top, are occasionally used, in which to winter some of the hardier kinds of green-house exotics, as myrtles, cistuses, magnolias, and some other kinds, which will generally stand the Winter in tolerable good condition.

The collection of Green-house plants in the English gardens is very considerable, in different genera, species, and varieties; consisting both of woody, herbaceous, and succulent kinds; all exotics, or natives originally of foreign warm countries in the South of Europe, and in Asia, Africa, and America; always raised in pots, for removing in and out of the Green-house, they being such as will grow here in the full air all Summer, from the beginning or middle of May until October, when the whole require removing in their pots under the shelter of a Green-house for the Winter season, and to remain till May afore said, or sometimes the beginning of June, in unfavourable seasons, and then removed again into the open air in the Flower-garden or Pleasure ground, to continue for the Summer.

The Green-house plants consist of three tribes, viz. woody or shrubby, and tree kinds, herbaceous plants, and succulent exotics. The tree and shrub kinds have woody durable or abiding stems and branches, and the leaves mostly evergreen; the herbaceous plants grow mostly with leaves from the bottom, herb-like, and with soft stems, furnished also, in many sorts, with leaves, and the stems generally decay at the end of a year or two, or some continue longer, but the roots remaining, send up new stalks in succession; and the succulent plants grow with fleshy stalks and leaves, abounding in humidity; hence called succulent, and in their growth appear,

appear, some of an herbaceous-like nature, others of a shrubby-like appearance, but mostly all durable or abiding, retaining the same stems and branches, and some also the leaves, for many years, as in the aloe tribe, &c.

In the tree and shrub kinds, the former generally affect a taller growth than the shrubby tribe, rising commonly with a single strait stem several feet high, branching out above into a full head; as in orange and lemon trees, &c. And shrubs generally branch out low, or some sorts rise with several stems or branches near the bottom, and assume a bushy growth; and in the whole, they are of various different growths, both upright, as in the greater part, and trailing and climbing kinds; and in sizes are from five or six inches, to six, eight, or ten feet, or more, in the different sorts; mostly evergreens, some of a fine aromatic odorous quality, many also flowering ornamentally, and some produce beautiful fruit.

The herbaceous plants consist of fibrous-rooted, fleshy-rooted, tuberous and bulbous-rooted kinds, mostly renew their stalks annually, and some are of longer duration, as before observed, growing from a few inches to several feet high in the different species and varieties; esteemed, some for the curiosity or variety of their growth, others for producing most beautiful flowers.

And the succulent tribe are of various singular growths, many of them somewhat between an herbaceous and shrubby nature, have mostly soft fleshy stalks, branches and leaves, full of moisture, often of great succulency; some consisting principally of many fleshy leaves rising immediately from the root, as several of the aloe tribe, &c. and the same leaves continue many years in growth; other sorts, or in the greater part, rise with fleshy stalks and leaves of abiding growth, the stalks not becoming woody, yet continue of several or many years duration, of many different sizes, from two or three inches to several feet high, and, as above noticed, are of various
curious

curious growths, many of them remarkable, singular and great curiosities,

As to the utility of Green-house plants, they in the general part are cultivated principally for curiosity, variety and ornament; most of the tree and shrub kinds being ever-green, their foliage continuing in verdure the year round; some also flower ornamentally, and some beautiful in a production of fruit, as in the orange and lemons: and in the herbaceous and succulent tribes, many are fine flowering plants. The succulent too, in particular, afford a very entertaining variety in their different odd growths, and mostly in constant verdure at all seasons.

Most or all the principal sorts of Green house exotics are cultivated for sale at most of the capital nursery-gardens, where those who intend to make collections may be furnished with assortments of the plants required.

All the sorts must always be raised or planted in pots, &c. in this country, for the convenience of moving the plants in and out of the Green-house, as before suggested; the pots smaller or larger, according to the different sizes of the plants: and for soil, they will mostly grow in any good garden earth, though the succulents particularly, on account of their humid quality, are generally the most successful and durable in a dry light sandy soil, as more fully explained in the general culture, after the following display of the different genera and species, &c. of the plants.

Thus far observed, relative to the green-house, and nature of the exotics of that conservatory, the following is a register of the principal sorts, all the species ranged in their proper families or genera, under the botanic and English name of each genus, viz.

Achillea

- | | |
|--|--|
| <p>Achillea (MILFOIL)</p> <p>— Silvery leaved</p> <p>— Ægyptian</p> <p>Adiantum (MAIDEN
HAIR)</p> <p>— True Maiden Hair</p> <p>Adelia (Adelia)</p> <p>Agave (GREAT AME-
RICAN ALOE)</p> <p>— Great American
(flower stalk branch-
ing)</p> <p>— <i>Striped leaved</i></p> <p>— Virginia Great Ame-
rican (flower-stalk
simple)</p> <p>— Viviparous or childing,
called silk grafs</p> <p>— Vera-crucian broad
leaved</p> <p>— Deep-green
leaved</p> <p>Albica (BASTARD
STAR of BETHLE-
HEM)</p> <p>— Major</p> <p>— Minor</p> <p>Aletris (ALOE ALE-
TRIS)</p> <p>— <i>Uvaria</i>, or Iris</p> <p>Uvaria</p> <p>Aloe (AFRICAN
ALOES)</p> <p>— Glaucous, or seagreen
leaved dwarf</p> <p>— Spotted broad
glaucous-leaved, or
Soap Aloe</p> <p>— Smaller spotted
leaved</p> | <p>— Mitre shaped</p> <p>— Perfoliated, or sword-
leaved tree aloe</p> <p>— Great prickly tree
aloe</p> <p>— Succotrine narrow-
leaved aloe</p> <p>— Variegated, triangular,
or partridge-breast dwarf
aloe</p> <p>— <i>Broad leaved</i></p> <p>— <i>Narrow leaved</i></p> <p>— Distichous, or two-
ranked tongue aloe</p> <p>— <i>Tongue leaved</i>
<i>spotted</i></p> <p>— <i>Tongue-leaved</i>
<i>Soap Aloe</i></p> <p>— <i>Plicated or fan Aloe</i>,
with a shrubby
stalk</p> <p>— <i>Warted tongue</i>
<i>Aloe</i></p> <p>— Carinated, or keel-
shaped leaved
Aloe</p> <p>— Spiral pentangular
Aloe</p> <p>— Retuse leaved, or
cushion Aloe</p> <p>— Viscous triangular
Aloe</p> <p>— Dwarf spreading</p> <p>— Arachnoideous, cob-
web dwarf</p> <p>— Margariferous, or
pearl Aloe</p> <p>— <i>Greater</i></p> <p>— <i>Minor</i></p> <p>— <i>Leaf</i></p> |
|--|--|

Alstroeme-

Alstroemeria (ALSTROE-MERIA)

- Pelegrinan, or purple spotted flowered
- *Ligta*, or purple and white striped

AMBROSIA—Shrubby Mexican

Amaryllis (LILY DAFFODIL)—See different sorts among the hot-house plants; and most of which may also be admitted in the green-house collection

Amellus (AMELLUS)

- *Lichnitis*, or ever-flowering Cape After

Anagallis (PIMPERNEL)

- *Monel'i*, or blue

Anthemis (CHAMOMILE)

- Maritime, or sea

Anthericum—SPIDER-WORT—shrubby

Anagyris—BEAN TREFOIL—stinking

Anthospermum (AMBER TREE)

- *Æthiopian*

Antholyza (ANTHOLYZA)—See the hot house plants; and may also be admitted in the green-house collection

Anthyllis (KIDNEY VETCH)

- *Barba Jovis*, Jupiter's beard, or Silver Bush

- Cytisus-like

- Various leaved

Antirrhinum (SNAP-DRAGON)

- Tristous, or sorrowful black-flowered dwarf

- Major—Striped leaved

Arctotis (ARCTOTIS)

- Superb, large flowering

- Plantain leaved

- Asperous, yellow and purple

- *Orange coloured*

- Southernwood leaved

- Diffused or spreading

- *Andryala regusina*

Arduipa (CAPE BUCKTHORN)

- Two spined

Aristolochia (BIRT-WORT)

- Great climbing

- Evergreen

- *Serpentaria*, or serpent rooted

Arbutus (STRAWBERRY TREE)—See also the *Hardy Trees*

Artemisia (MUGWORT, Worm-wood, &c)

- Arbore-

- Arboreſcent, or Tree Wormwood
- Nilotic, or Ægyptian
- Crithmum leaved
- Aſclepias (SWALLOW-WORT)
- Shrubby willow leaved
- Aſpalathus (AFRICAN BROOM)
- Cretan Aſpalathus
- White
- Arundo (REED)
- *Donax*, or Portu- gal
- *Indian variegated*
- Aſcyrum (*Aſcyrum*)
- Crux-Andrea, or St. Andrew's Croſs
- Aſparagus (ASPARAGUS)
- Retrofracted branched, or Larch leaved
- Acute leaved
- Declinated branched
- White
- Sarmentofeous, flexu- uoſe-ftalked
- Aſphodelus (ASPHO- DEL, or King's Spear)
- Fiſtulous leaved, leſſer
- Aſter (STARWORT)
- Shrubby
- Aſtragalus (MILK VETCH)
- *Tragacantha*, or Goat's Thorn
- Montpellier Aſtra- galus
- Athanaſia (GOLDY LOCKS)
- Three-forked leaved
- Crithmum leaved
- Hoary
- Atraphaxis (*Atraphaxis*)
- Undulated, or curled leaved
- Atropa (DEADLY NIGHTSHADE)
- Shrubby Atropa
- Baccharis (PLOUGH- MAN'S SPIKE- NARD)
- Iva-foliated, or falſe Jeſuits-Bark leaved- Peruvian
- Oleander leaved
- Putrid, or ſœtid
- Baltimora *Erecta* (UPRIGHT BALTI- MORA)
- Berberis (BERBERRY)
- Cretan box-leaved
- Bignonia (TRUMPET FLOWER)
- *Unguis-cati*, or Cat-clawed four-leav- ed
- Bofea (GOLDEN-ROD- TREE)
- *Yarvamora*, or Golden Rod Tree
- Bubon, or (MACEDO- NIAN PARSLEY)
- Common
- *Galba-*

- *Galbanum*, or Galbani-ferous Bubon
- Gumi-bearing, Myrrh-leaved
- Bupthalmum* (OX-EYE)
- Shrubby
- Arboreſcent, or Tree
- Maritime, or ſea Ox-eye
- Bupleurum* (HARES-EAR)
- Different formed leaved
- Long leaved
- Shrubby
- Cacalia* (FOREIGN COLT'S FOOT)
- (*Ficoides*) or Baſtard *Ficoides*
- *Atriplex* leaved
- *Anteuphorbium*, or Spurge Bane
- *Kleinia*, or Cabbage Tree
- Creeping *Cacalia*
- Sow Thistle leaved
- Cactus* (Melon Thistle, INDIAN FIG, &c.)
- *Opuntia*, or oval jointed Indian Fig
- Monili-form, or Necklace ſhaped
- Calceolaria Fothergilla*
- Calendula* (MARI-GOLD)
- Shrubby
- Graſs-leaved
- Naked-ftalked
- Calla Aethiopica* (ÆTHIOPIAN ARUM)
- Callicarpa Americana*, or (AMERICAN CALLICARPA)
- Camellia Japanica* (JAPANESE CAMELLIA, or Japan Roſe)
- Campanula* (BELL-FLOWER)
- Golden
- American
- Round leaved
- Canarina Campanula* (CANARY BELL-FLOWER)
- Broad leaved
- Narrow leaved
- Cafferina pubeſcens* (DOWNY CASSE-RINA)
- Caffine HOTTENTOT CHERRY*
- *Maurocenia*, or greater Hottentot Cherry)
- Minor, or leſſer
- Cape Phillyrea
- *Paragua*, Yappoſon or Paraguay
- Ceanothus Africanus* (AFRICAN ALATERNOIDES)
- African
- Aſiatic
- Celaſtrus* (STAFF TREE)
- Box leaved
- Pyra-

- *Pyracantha* leaved
- Spinose, or thorney
- Centaurea* (CENTAURY)
- Shrubby
- Regusan Silvery
- Evergreen
- Oriental
- Ceratonia* (CAROB-TREE, or ST. JOHN'S BREAD)
- (*Siligna*) or Silignose Carob Tree
- Cyrilla Racemiflora* (RACEMOUS FLOWERED CYRILLA)
- Chenopodium* (WILD ORACH)
- Cape
- Rugose, or wrinkled
- Multifid leaved shrubby
- Chironia* (AFRICAN CENTAURY)
- Shrubby
- Berry-bearing
- Chrysanthemum* (CORN MARI-GOLD)
- Flosculous flowered Cretan
- Shrubby
- Maritime, or Sea
- Chrysocoma* (GOLD TUFT)
- *Coma-aurea*, or African Gold locks
- Bowing, or nodding
- Ciliated heath leaved
- Retuse
- Mugwort-like
- Cineraria* (AFRICAN RAGWORT)
- Ground-ivy leaved
- Othonna-like oblong leaved shrubby
- (*Amelloides*) Amellus-like, or blue shrubby Cape Aster
- Poplar-leaved Cineraria
- Cistus* (Cistus, or ROCK ROSE)
- Cretan
- Poplar leaved
- Hairy
- Halimus leaved
- White
- Vine leaved
- Sage leaved
- *Helianthemum*, or Sun Dwarf Cistus
- *Laurus* leaved
- Citrus* (CITRON, ORANGE TREE, &c.)
- *Aurantium*, or Orange Tree
- China Orange
- Seville Orange
- Willow leaved Orange
- Myrtle leaved Orange
- Curled leaved Orange
- Striped leaved Orange

Orange

- *Orange*
- *Striped fruited*
- *Double flowered*
- *Dwarf Nutmeg*
- *Orange*
- *Decumana*, or
great Shaddock
- *Orange*
- Three leaved
- (*Medica*) Median
Apple, or Citron
- Lemon Tree
- *Double flowered*
- *Lemon*
- *Striped leaved*
- *Lima*, or West-
India Lime
- *Cliffortia ilicifolia*
(ILLEX LEAVED
CLIFFORTIA)
- *Clusia (CLUTIA)*
- *Alaternoides* narrow-
leaved
- *Pulchellous* broad-
leaved
- *Colutea frutescens*
(SHRUBBY SCAR-
LET COLUTEA, or
Bladder Senna)
- *Convolvulus (BIND-
WEED)*
- *Canard* woolly heart
leaved
- *Cneorum*, or silvery
- *Cantabrian Flax*
leaved
- *Althæa*-like
- *Doryonium*, or
Eastern
- *Ivy* leaved
- *Farinose*, or
mealy
- *Commelina (COMME-
LINA)*
- Upright
- African
- *Conyza (FLEA BANE)*
- *Candidous*, or white
woolly leaved
- Viscous or gummy
- Soft leaved
- *Cronilla (JOINTED-
PODDED COLU-
TEA)*
- *Rushy-leaved*
Montpelier
- *Coronated* nine-
leaved
- *Glaucous* seven-
leaved
- *Valentian* taller
- *Silvery silky-leaved*
- *Cotula (COTULA)*
- *Tantey-leaved* cotula;
called shrubby Tan-
sey
- *Cotyledon (NAVEL-
WORT)*
- *Orbicular* round
leaved
- *Hemispherical*
leaved
- *Spurious*, Spatula-
shaped leaved
- *Sawed* leaved
- *Craffula (LESSER
ORPINE)*
- *Scarlet*
- *Cultivated*, or
knifed
- *Four-*

- Four-angled leaved
- Quadrated, or Whip-cord *Crassula*
- Croton* (TALLOW TREE)
- Sebiferous, or tallow-bearing Chinese *Croton*
- Crotalaria* (CROTALARIA)
- Laburnum-leaved
- Cunonia* (CUNONIA)
- Cape *Cunonia*
- Cupressus* (CYPRESS-TREE)
- Juniperoide Cape Cypress
- Cyclamen* (CYCLAMEN, or Sow-Bread)
- Persian *Cyclamen*
 - *Odorous purple*
 - *White and purple*
- Round-leaved purple Spring flowering
- Digitalis* (Fox GLOVE)
- Canary
- Obscure, or black Spanish
- Diosma* (DIOSMA, or AFRICAN SPIRÆA)
- Opposite leaved
- Red-flowered
- Hirsuted or hairy
- Ciliated
- Lance leaved
- Ericoideous, or heath-like
- Cypress *Diosma*
- Cape
- Dracocephalum* (DRAGON'S HEAD)
- Canary *Dracocephalum*, called Balm of Gilead
- Dionæa* (VENUS'S FLY TRAP)
- (*Muscipula* or Venus's fly trap)
- Dolichos* (DOLICHOS, or Creeper)
- Evergreen
- Ligneous
- Cape
- Brazilian
- Ebenus* (EBONY)
- Cretan purple
- Empetrum album*, or WHITE PORTUGAL CROW BERRY)
- Erica* (HEATH) mostly of the African kinds
- Mediterranean purple
- Many flowered dwarf purple
- Three flowered African
- Cerinθοideous scarlet African
- Green-purple
- Tubulous flowered
- Abietinous, Fir or Juniper-leaved
- Carneous or flesh-coloured trailing
- Curve flowered
- Berried,

- Berried, or globose flowered
- Long flowered
- Pitcher flowered
- Arboreous, or tree like shrubby
- Southern, long-spiked
- Persolute, or Garland
- Plane-leaved
- Erinus *alpinus* (ALPINE Erinus)
- Eriocephalus (ERIOCEPHALUS)
- African
- Racemose flowering, or silvery-leaved
- Pectinated, or Comb-leaved
- Erythrina (CORAL TREE)
- Coral'odendron, or true Coral Tree
- Herbaceous long spiked
- Euphorbia (SPURGE)
- Medusa's-head
 - *Trailing Medusa's head*
 - *Upright*
 - *Minor*
- Viminalis, or Oser-twiggy stalked
- Red stalked
- Myrtle leaved
- Amygdaloide striped leaved
- Spinose, or thorny
- Various leaved
- Tree Spurge
- Fritillaria (FRITILLARIA)
- Royal Crown (*corona regalis*)
- Dwarf
- Galenia *Africana* (AFRICAN GALENIA)
- Genista (DWARF BROOM)
- Canary broom
- Candicant Montpellier broom
- Spinose, or thorny
- Geranium (Crane's Bill or GERANIUM)
- Zone Marked, or Common Horseshoe Geranium
 - *Scarlet flowered*
 - *Variiegated leaved*
 - *Silver edged leaved*
 - *Gold striped*
 - *Flame-coloured flowered*
- Inquinant, Scarlet Geranium
- Fulgid, or flaming red
- Papilionaceous, or butterfly
- Cucullated, or hooded leaved
- Shield-shape, or Ivy leaved
- Gibbous, or gouty stalked
- Vine-

- Vine-leaved Balm-scented
- Capitated flowered, rose scented
- Carnose, or fleshy stalked
- Sorrel tasted thick leaved
- Birch leaved
- Cordifolium, or heart leaved
- Lanceolatum, or spear leaved
- Terebinthinum, or aromatic smelling
 - *Oak leaved*
- Triangular stalked
- Glaucous, or sea-green
- Lavigated, or polished leaved
- Glutinous
- Lacerated, or torn leaved
- Rough leaved
- Tabular inscribed leaved
- Alcea-like cut leaved
- Lady's mantle leaved
- Most-odorous, or musky
- Nofegay Geranium
- Gooseberry leaved
- Coriander leaved
- Myrrh leaved
- Prolific compound umbelled
 - *Pinnated leaved*
- *Eared leaved*
- *Long leaved*
- Lobated leaved
- *Hairy*
- *Pinnatifid*
- Marshmallow leaved
- Cotyledon orbicular leaved
- Arduinous, or hearted five-lobed leaved
- Rutilant, multifid leaved
- Tristeous, or Sorrowful Night-smelling (or Anemone-leaved)
- Acaulis, or stalkless Dwarf
- Gladiolus (GLADIOLE, SWORD LILY, or CORN FLAG)
 - *Tristis*, or sorrowful dark spotted flowered
 - Plicated, or enfolded leaved
 - Narrow Gladiole
 - Straight, or upright
- Gnaphalium (EVERLASTING)
 - Arboreous, or Tree Everlasting
 - Snowy
 - Ericoideous, or heath-like
 - Oriental
 - *Stoebas citrina*, or Gold Locks Everlasting
 - Cymose-umbelled
 - Cylindric, scarlet

R

Fan-

- Fan-shape
- Odorous
- Gnidia pinifolia*
(PINE-LEAVED
GNIDIA)
- Gordonia* (LOBLOLLY
BAY)
- *Lasianthus*, or Loblolly
Bay
- Downy leaved
- Gorteria* (GORTER-
RIA)
- Ringent, or grin-
ning
- Ciliated
- Setose, or bristly
- Grewia* (GREWIA)
- Occidental, elm-leaved
purple
- Halleria* (AFRICAN
FLY HONEY-
SUCKLE)
- Lucid or shining
- Heliotropium* (TURN
SOL)
- Peruvian many
spiked
- Shrubby solitary
spiked
- Hermannia* (HERMAN-
NIA)
- *Althæa* leaved
- Alder leaved
- Candicans, or
white
- Lavender leaved
- Gooseberry leaved
- Hippia frutescens*
(SHRUBBY ÆTHI-
OPIAN TANSEY
- Hopea tinctoria* (DYER'S
HOPEA)
- Hyoscyamus aureus*
GOLDEN HEN-
BANE)
- Hypericum* ST. JOHN'S
WORT)
- Balearican, or Minorca
warted
- Monogynous Chinese
- Olympian
- Jasminum* (JASMINE)
- Great flowered
Catalonian
- Azorian
- Most-odorous Yellow
Indian
- Iberis* (CANDY
TUFT)
- Everflowering
Shrubby
- Evergreen narrow
leaved
- *Striped leaved*
- Ilex* (HOLLY)
- Asiatic Holly, or Para-
do Tree
- Illicium anisatum*, or
(ANISE-SEED
TREE)
- Illecebrum Parohnyia*, or
(MOUNTAIN
KNOT-GRASS)
- Juniperus* (JUNIPER
TREE, CEDAR,
&c)
- Bermudian Cedar
- Phœnician Cedar
- Justicia* (Malabar Nut
Adbatoda,

- Adhatoda*, or com-
 mon)
Ixia (IXIA)
 — Chinese spotted
 flowered
 — One flowered
 — Pulcherimous, or most
 beautiful
 — Squalid
 — Crocated, or Saffron
 coloured
 — African woolly
 headed
 — Specious, or shewy
 — Corymbose flowered
 blue
 — Flexuose spiked
 — Bulb-bearing
 — Maculated, or spotted
 yellow flowered
 — Many-spiked
 — *Scilla amœna*, or Squill-
 flowered
 — Plicated
 — Tube flowered
Kiggelaria (KIGGE-
 LARIA)
 — African sawed
 leaved
Lachnæa (LACH-
 NÆA)
 — Conglomerated
 flowered
Lantana (AMERICAN
 VIBURNUM)
 — Sage leaved
 — African ilex-
 leaved
 — Involucrated flow-
 ered
- Prickly nettle
 leaved
 — Three leaved
Lavatera (LAVATERA,
 or CRETAN MAL-
 LOW)
 — Olbian Shrubby
Lavatera, or Tree
 Mallow
 — Three-lobed leaved
Laurus (BAY TREE)
 — *Borbonia*, or Carolina
 Bay
 — Indian broad
 leaved
 — *Camphora*, or Cam-
 phire Tree
 — Summer leaved, or
 Deciduous Bay
 — Stinking
 — Noble or common
Lavendula (LAVEN-
 DER)
 — Multifid leaved
 — Dentated leaved
Leontice (LEONTICE)
Linum (FLAX)
 — Tree Flax
 — Yellow Austrian
 — Sea Flax
Lobelia Cardinalis
 (SCARLET CARDI-
 NAL FLOWER)
Lotus (BIRD'S FOOT
 TREFOIL)
 — Cretan Silvery
 — Jacobean Black
Lotus
 — *Dorycnium*, or
 Montpellier Lotus

- Hairy
- Erect podded
- Lycium (COX-THORN)
- African linear narrow leaved
- Barbarian thick lance leaved
- Capsular fruited Mexican
- Magnolia (see also the Hardy Tree and Shrubs)
- Marrubium (HORE-HOUND, &c.)
- *Pseudo-dictamnus*, or Bastard Dittany
- Medeola (BASTARD ASPARAGUS, &c.)
- *Asparagoides*, or Bastard Asparagus
- Virginia whorled-leaved
- Medicago (MOON TREFOIL) Tree, or Shrubby Medic
- Melia (BEAD TREE)
- *Azederach*, or common Syrian Bead Tree
- *Azadirachta*, or Indian Melia
- Melianthus (HONEY FLOWER)
- Major or greater
- Minor
- Mentha (MINT)
- Canary Shrubby
- Paniculated
- Mesembry anthemum (FIG MARIGOLD)
- Joint-flowering
- Thick leaved creeping
- Scymitar shape
- Falcated, or sickled
- Scizar-forked
- Glomerated, or crowded leaved
- Expanded
- Micant, or glittering
- Sawed leaved
- Emarginated, or end-notched
- Tortuose or twisted
- Corniculated
- Veruculated, or spit-leaved
- Glaucous, or sea-green
- Dog chap'd
- Cat chap'd
- Rostrated, or Heron-beaked
- Two coloured flowered
- Filamentose six-angled
- Dagger-form
- *Ax-form*
- Uncinated, or hooked
- Spinose, or thorny
- Leather thong'd
- Slender leaved
- Stipulaceous
- Quill-form
- Unbel flowering
- *Tropolium*, or Sea Starwort leaved
- Splendent leaved
- Delroideous, or Delta-like
- Daisy-flowered
- Barbated, or bearded
- Hispid, or bristly
- Tuberous-rooted
- Tongue-

- Tongue-form leaved
- Different-form leaved
- Rough-leaved
- Edible-fruited
- White-leaved
- Echinated, or hedge-hogg'd
- Striated flowered
- Villose-leaved
- Decumbent, or trailing
- Knot-flowering
- Night-flowering
- Moræa (MORÆA)
- Vegetaceous, channelled sword-leaved
- Rushy, or Iris-leaved
- Myrica (CANDLE-BERRY MYRTLE)
- Oak-leaved
 - Downy Oak leaved
- Carolina Oak leaved
- Cordated, or Heart round-leaved
- Three-leaved
- Myrsine (AFRICAN Box)
- Myrtus (MYRTLE)
- Common broad-leaved
 - Roman broad-leaved
 - Double flowering
 - Tarentine Box-leaved
 - Striped Box-leaved
 - Italian upright branching
 - Striped Italian
 - Boetic, or Spanish Orange-leaved
 - Portugal acute-leaved
 - Belgic, or Dutch broad-leaved

- Dagger-pointed Nutmeg Myrtle
- Striped Nutmeg Myrtle
- Broad curled-leaved
- Rosemary-Leaved
- Narrow reflected leaved
- Three-leaved Jew's Myrtle
- Blotched-leaved
- Nerium, (OLEANDER, or ROSE BAY)
- Oleander, or common Rose Bay
- Red flowered
- Double red
- White
- Gold striped leaved
- Divaricated branching
- Double flowered
- Antidysenteric, ovate acuminate leaved
- Ceylon opposite leaved
- Olea (OLIVE TREE)
- European common
- Broad leaved
- Narrow leaved
- Box leaved
- American Olive
- Odorous, or sweet-scented
- Cape round-leaved
- Gnons (REST-HARROW)
- Natrix, or ternate ovate-leaved under-shrubby Ononis
- Round-leaved shrubby
- Curl-leaved shrubby

Origanum

Origanum (ORIGANY
 OF MARJORAM)
 — Ægyptian Marjoram
 — *Dictamnus*, or Dittany
 of Creta
 — Sipylean Mountain Ori-
 gany, or Dittany of
 Mount Sipylus
 — *Marjorano*, or Sweet
 Marjoram
 — *Maru*, or Cretan
 Marjoram
 — Variegated Marjoram
 Ornithogalum (STAR OF
 BETHLEHEM)
 — Broad-leaved
 — Arabian
 — Yellow
 Osteospermum (HARD
 SEEDED CHRYSAN-
 THEMUM)
 — Peas-bearing African
 — Moniliferous, or Bead-
 bearing
 — Rigid
 — Thorny
 Othonna (RAGWORT)
 — Bulbous, many formed
 — Coronopus-leaved
 shrubby
 — Pectinated, or Comb-
 leaved
 — Cheirifoliate, or Wall-
 flowered leaved
 — Arboreſcent, or Tree
 Rag-wort
 Pancratium (PANCRA-
 TIUM, or LILY
 NARCISSUS)
 — Carolina narrow-leaved

Passerina (SPARROW
 WORT)
 — Thread-form African
 Passiflora (PASSION-
 FLOWER)
 — Incarnate-flowered
 three-lobed leaved
 — Yellow-flowered
 — Round leaved
 Paulinia Aurea (GOL-
 DEN PAULINIA)
 Periploca (VIRGIN
 SILK)
 — Grecian Periploca
 — African climbing
 — Apocynum
 Philadelphus (SYRINGA)
 — Aromatic New Zea-
 land Tea
 — *Broad-leaved*
 — *Narrow leaved*
 — Reddish stalked
 — Shining leaved
 — Hirsuted, or shaggy-
 leaved
 Phlomis (JERUSALEM
 SAGE)
 — Purple
 — Leonurus, or Lion's
 Tail
 — Nepeta-leaved
 Phylica (BASTARD
 ANATERNUS)
 — Erica-like, or
 Heath-leaved
 — Box-leaved
 Phyllis (BASTARD
 HARE'S EAR)
 — [*Nobla.*] Simpla Nobla,
 or Canary Phyllis
 Physalis

- Physalis (Alkekengi, or
 WINTER CHERRY)
 — Somniferous shrubby
 — Flexuose branched
 Pistacia (PISTACIA
 NUT)
 — True
 — *Terebinthus*, or
 Turpentine-tree
 — Three-leaved Pistacia
 — *Lentiscus*, or Gum-
 Mastic Tree
 Polygala (MILK-WORT)
 — Myrtle-leaved
 — Spinous, or thorny
 Poterium (BURNET)
 — Præsum (HEDGE-
 NETTLE)
 — Major, or greater
 Shrubby
 Protea (SILVER TREE)
 — Argentaceous, or common
 Silver-Tree, broad-
 leaved
 — Cone-bearing narrow-
 leaved
 — *Lepidocarpodendron*, or
 Spear-leaved Protea
 — Glauous-coloured
 — Salix-leaved downy
 — Bractical, or Floral
 leaved
 — Racemose-spiked
 Psoralea (PSORALEA,
 or African Trefoil)
 — Pinnated leaved
 — Aculeated or prickly,
 ternate-leaved
 — Bituminous, ternate-
 leaved
 — Cytifus-like, with
 fived-pinnated and
 three'd-leaves
 Punica (POMEGR-
 NATE)
 — *Granatum*, Granate
 Apple, or Pome-
 granate
 — Double flowered
 — Dwarf Pomegra-
 nate
 Rhododendron
 (DWARF ROSE-
 BAY. *See also the*
Hardy Trees.
 Rhus (SUMACH)
 — Tomentose, or
 Downy
 — Narrow-leaved
 — Lucid-leaved
 — Polished smooth-
 leaved
 — Odorous
 — *Cobbe* of Ceylon
 Roella (AFRICAN
 CAMPANULA)
 — Ciliated
 Rosa (ROSE-TREE)
 — Indian, or Chinese
 Rose
 Rosmarinus (ROSE-
 MARY)
 — Silver striped leaved
 — Gold striped leaved
 Royena (ROYENA)
 — Shining oval-leaved.
 — Smooth Myrtle-
 leaved
 — Villose hairy-leaved
 — Hirsuted, or shaggy
 leaved

- | | |
|----------------------------------|------------------------------|
| — leaved | — Sambuca-leaved |
| — Broad-leaved | — Shrubby |
| Rubia <i>perigrina</i> (Foreign | — Lucid, or shining |
| or Turkey Madder) | leaved |
| Ruscus (BUTCHERS | Scilla (SQUILL, or |
| BROOM) | Sea Onion) |
| — <i>Hypophyllum</i> , or broad- | — Peruvian |
| leaved Alexandrian | — Autumnal |
| Laurel | Saxifraga (SAXI- |
| — Androgynous or true | FRAGE) |
| Alexandrian | Stoloniferous, or shoot- |
| Laurel | bearing |
| — Salvia (SAGE) | — <i>Cotyledon pyramidal</i> |
| — Canary Sage | or pyramidal Saxi- |
| — African | frage |
| — Golden, or Yellow | — Mutated pyramidal |
| — Mexican | — <i>Silver-edged</i> |
| — Nilotic Ægyptian | Selago (SELAGO) |
| — Cape Sage | — Corymbus flower- |
| — Scarlet | ing |
| — Paniculated | — Spurious narrow- |
| Salsola (GLASSWORT) | leaved |
| — Cape | Sempervivum (HOUSE |
| — Shrubby | LEEK, &c. |
| Salicornia (SHRUBBY | — Arboreous, or Tree |
| JOINTED GLASS- | Sedum |
| WORT) | — Striped leaved |
| Scabiosa (SCABIUS) | — Canary Sedum |
| — African | — Globiferous, or |
| — Cretan | Globe-bearing |
| — Rigid, or stiff- | — Arachnoideous, or |
| leaved | Cob-web Dwarf |
| Schinus (PERUVIAN | Sedum |
| MASTIC-TREE) | Sedum (Sedum, or |
| — <i>Molle</i> , or sawed- | LESSER HOUSE- |
| leaved Schinus | LEEK) |
| — <i>Areira</i> , or entire- | — Red-flowered |
| leaved Schinus | — Purslane-leaved |
| Scrophularia (FIG- | Sideritis (IRON- |
| WORT) | WORT) |
| | — Syrian |

- Syrian Stachys, or
Iron-wort
- Canary
- Sideroxylum (IRON-
WOOD)
- Unarmed, or
thornless
- Lycium-like,
thorny
- Tenaceous Carolina
- Opposite-leaved
- Silene (VISCIOUS
CAMPION)
- Shrubby Myrtle-
leaved
- Giant, concave-
leaved
- Vallesian
- Cape
- Sisyrinchium (or BERMU-
DIANA)
- *Bermudianum*, or Blue
Bermudiana
- *Variegated-leaved*
- Palmated-leaved
- Grass-leaved
- Cape Sisyrinchium
- Smilax (ROUGH
BIND-WEED)
- Lofty-growing
- Floridan
- Solanum (NIGHT-
SHADE)
- *Pseudo-Capsicum*,
- Bastard Capsicum or
Winter Cherry
- Oak leaved Night-
shade
- Soldanella (SOLDA-
NEL)
- Alpine round-
leaved
- Spartium (BROOM)
- Spinous,, three-
leaved
- Radiated starry
- Complicated
- Sphere-headed
- Statice (Thrift, SEA
PINK, &c.)
- Suffruticose, or under
shrubby
- Specious flowered
- Monopetalous, narrow-
leaved
- Tartarian
- Stachys (BASE HORE-
HOUND)
- Æthiopian
- Cape
- Tomentose, or
hoary
- Struthiola (STRU-
THIOLA)
- Virgated or twiggy
- Erect
- Styrax (STORAX
TREE)
- Official common
- Polished smooth-
leaved
- Great-leaved
- Tarconanthus (AFRI-
CAN FLEA-BANE)
- Camphorate, Sage-
leaved
- Taxus (YEW TREE)
- Elongated, or broad-
leaved Æthiopian
- Nut-

- Nut-bearing Japan Yew
- Tetragonia (TETRAGONIA)
 - Shrubby
 - Herbaceous
 - Corniculated
- Teucrium (GERMANDER)
 - Fruticant, or shrubby
 - [*Marum*,] Syrian Marum, or Cat Thyme
 - Broad-leaved Germander
 - *Polium*, or Poley Mountain
 - Yellow
 - Mountain
 - Cretan
 - Scarlet
 - White
- Thea (TEA-TREE)
 - Green-tea Tree, light-green leaved
 - Bohea-tea Tree, dark-green leaved
- Thuja (ARBOR VITÆ)
 - Oriental, or Chinese
- Thymbra (MOUNTAIN HYSSOP)
 - Spike flowering
 - Verticillated, or whirled
- Thymus (THYME)
 - *Mastichina*, or Mastic Thyme
- Trachelium *cæruleum*, or Blue Throatwort
- Trichelia *glabra*, or Smooth Trichelia
- Trichomanes *Canariense*, Canary or Portugal Fern
- Triopteris *Jamdiensis* Jamaica Triopteris
- Tropæolum (NASTURTIUM, or Indian Cress)
 - Major, *Flora plena*, or Greater double-flowered
- Trollius (GLOBE FLOWER)
 - Asiatic Globe Flower
- Verbena (VERVAIN)
 - Bonarian tall-spiked
 - Indian
- Viburnum *glabrum*, or Smooth Viburnum
- Vitex, CHASTE TREE
 - Three-leaved
 - (*Negundo*) or Chinese five-leaved
- Wachendorfia (WACHENDORFIA)
 - Thyrses flowering
 - Panicle-flowering
- Xeranthemum, EVERLASTING FLOWER
 - Retorted or reflexed
 - Fulgid or flamed
- Yucca (ADAM'S NEEDLE)
 - Aloe-

— Aloe-leaved	Zygophyllum (BEAN
— Dragon-tree leaved	CAPER)
— Glorioso intire- leaved	— Sessile or close sitting leaved
— Filamentose, or thready- leaved	— (<i>Morgsana</i>) or four- leaved Bean Caper

Thus far completes the display of the genera, species and varieties of the principal Green-house plants, consisting of numerous woody or shrub and tree kinds, many succulent exotics and herbaceous perennials, with some curious bulbous and tuberous-rooted flowers; all which, of the different tribes, being exotics of a tender nature, natives originally of distant warm climates, that in this country they require the protection of a Green-house in Winter, from October till May, and admit of being placed in the open air in Summer, from May till October aforesaid; and therefore must always be cultivated in pots, &c. in order for removing them in and out of the Green-house in the above seasons.

As to the utility of Green-house plants in gardening, it, as before observed, is principally for variety, ornament and curiosity. They, in their various different growths, foliage, flowers, and fruit, &c. display a considerable variety at all seasons; many of them are also very ornamental, and others are singular and curious in their general structure and appearance; and in the greater part, being ever-green, they continue in verdure the year round, and some sorts continue flowering ornamentally most times of the year, as in geraniums and some others; and some, as in oranges and lemons, remain furnished with beautiful fruit, in different degrees of growth, both in Summer and Winter; that in the whole, they both when disposed together in the Green-house for their Winter residence, and when placed in the open air in Summer, effect a most agreeably-entertaining diversity.

That, as they are all exotics, or natural inhabitants of distant countries, collected from many different parts of the world, they display various different structures
and

and dimensions of growth, both of woody, succulent, and herbaceous tribes, from two or three inches to several feet high, and some are of trailing, creeping, and climbing growths. Numerous sorts are of the woody, or shrub and tree kind, as before intimated, all with continuing stems and branches, of great variety in dimensions, leaves, flowers, &c. many sorts are of the succulent tribe, having fleshy stalks and leaves, mostly of a durable nature, by the same stalks, &c. continuing; all very replete with humidity or moisture, and of various, curious, and singular structures, forms, and different sizes, from a few inches to several feet, in upright, and trailing, and creeping growths; likewise, many are curious herbaceous exotics, consisting of fibrous and fleshy rooted flowering perennials, with durable roots, but mostly either renew their stems annually, less or more, or some continue several years, and with several genera and species of curious bulbous and bulbous-rooted flowers; and in which different tribes, nearly one mode of general culture is applicable to the whole, all planted in pots of any good rich garden mold, except the succulents, which on account of their naturally humid state, should be planted in dry, light, sandy earth, or a compost of that, and any dry, rubbishy soil.

Green-house plants, are raised by various different methods, as by seeds, cuttings, layers, suckers, offsets, parting roots, budding, grafting, &c. as hereafter explained.

General observations on planting the different sorts.

AS above suggested, all the plants of the green-house collection must always be kept in pots, for the convenience of removing them in and out of the green-house, proportioning the sizes of the pots to that of the various sorts of plants; generally small pots at first in the young growth of the plants, and according as they encrease in size, are to be shifted into larger; and some sorts, when considerably advanced, as in oranges, lemons,

lemons, and American aloes, &c. they are occasionally shifted into tubs, smaller or larger, according to the encreased size of the plants.

Collections of green-house plants may be had of most of the principal nurseries, ready raised in pots to a proper growth; and as numerous sorts propagate freely, either by seeds, cuttings, layers, suckers, off-sets, slips, parting roots, &c. they may be encreased by these methods by degrees, and by obtaining cuttings, slips, off-sets, &c. occasionally from any neighbouring gardens, in the Spring, Summer, and Autumn, for planting.

The season for planting green-house exotics, either in young plants, or by cuttings, slips, suckers, layers, is either in the Spring, in March, April, May, or cuttings, slips, &c. occasionally in the Summer, June, July, and August.

The proper soil for green-house plants, may be any rich, mellow garden earth, or a compost of light, mellow loam, and light garden mold, having been prepared in a heap, in a free situation, enjoying the benefit of the sun and air, &c. tho' for the succulent plants in particular, as being wholly of a fleshy nature, abounding considerably in moisture, and as in the places of their natural growth, they mostly grow in dry, sandy, or rocky, or mountainous situations, it is eligible to plant them in some similar soil, of a light, dry temperature, or a compost of light sandy earth, and dry rubbishy soil, as before suggested, as in rich good earth, some very succulent kinds are liable sometimes to rot in Winter.

Several sorts of green-house plants are annually imported from Italy, Spain, &c. particularly, oranges, lemons, citrons, curious jasmines, and several others; generally in the Spring, about March and April, being commonly brought over without pots, packed up close in chests, with a little mold or moss about the roots, and sold at many of the Italian Warehouses in London, and other principal sea-port cities and towns, where they may be purchased for planting; observing previous

to which, it is proper to place the roots, and part of the stems in tubs of soft water for a day or two, to prepare the roots and fibres, &c. for variegation, and prune any straggling roots, and long shoots of the head, then plant them in pots; or large orange and lemon trees may be planted in tubs; give water to the earth of the pots or tubs as soon as planted, to settle the earth close about the roots; and it would then be of great advantage to plunge the pots in a moderate bark-bed made in some glass-case, which would forward their fresh rooting considerably, and encourage their shooting sooner, and more freely at top, to form good heads by the end of Summer, the same year, supplying them with proper admissions of fresh air, necessary waterings, and in hot weather give occasional shade at top in the heat of the day; or where there are not the accommodation of bark-beds, place them in the green-house, or glass case, giving water and shade, as above; or they might be forwarded by dung hot-bed heat, having some tan bark at top, or in default of this, some light dry mold laid six or eight, ten, or twelve inches thick, in which to plunge the pots; and in all of which, when they have advanced in growth at top in new shoots, give plenty of air below and above; and towards the middle or end of July, or beginning of August, may be removed in their pots into the full air, in a somewhat shady situation, to harden them by degrees till the end of September or beginning of October, then housed with the other exotics of the green-house.

In planting the different sorts of Green-house exotics, of such as are raised to proper rooted plants, generally plant only one in each pot, small pots at first, according to the size of the different sorts of plants; and according as they encrease in size after one or two Summers growth, or more, they will require to be occasionally shifted into larger pots, &c. performed generally either in the Spring, in March, April, or beginning of May, or in August, or September, and in which shifting, commonly remove them mostly with the ball of earth

earth about the roots, trimming off some of the outward old earth at sides and bottom, and cut off the surrounding dry matted fibres of the roots; then, having some fresh earth in the new pots, place one plant in each, and fill up with more fresh compost, and watered.

General Culture of the Plants.

IN regard to the general culture of Green-house plants, they, as before observed, require protection of the Green-house in Winter, to defend them from frost and severe cold, and to be placed in the full air all Summer.

That for their Winter culture, it is proper to begin to remove some of the most tender kinds into the Green-house in September, especially many of the very succulent exotics, especially if much rain falls, which, as being of themselves very full of moisture, that considerable or incessant falling wet at this season might occasion them to rot; likewise, towards the middle or latter-end of September, if cold nights prevail, it is adviseable to remove in the oranges, lemons, and several others of the tenderer kinds, as the cold air, or slight morning frost would be apt to injure the leaves and young shoots, and change the colour of the former to a yellow hue, that they would not recover their natural verdure all Winter; however, in the beginning of October, according as the season is less or more favourable, take in all the more tender plants, and by the middle of that month, at least, house all the myrtles, geraniums, and all the other Green-house plants.

Observe, previous to removal into the Green-house, clear the heads of the plants from decayed leaves, and prune any irregular and stray rambling shoots, and cut out decayed shoots, stalks, &c. clear the earth in the pots from weeds, then loosen the mold at top an inch or two deep, or may remove some of the loosened earth,
and

and fill up the pots with an equal portion of fresh mold, which will prove beneficial in refreshing the roots, and promoting a lively verdure in the leaves of the head as well as have a neat appearance in the surface of the earth in the pots.

In placing the plants in the Green-house, dispose the tallest more or less backward, the others in a regular gradation, according to their several heights, to the lowest in the front row, generally disposing them in a diversified order to display a conspicuous variety in the different forms, colours, &c. the smaller succulents, and others of diminutive growth, should be disposed principally forward, or upon narrow shelves, to have the full sun, not shaded by the plants of larger extension.

After being placed in the Green-house, observe, in September and October, if the weather continue mild, to admit plenty of air every day, or when first brought in, may continue the windows open day and night in mild dry weather, for the first week or two; but when the nights prove cold, shut all close every evening till morning, and in all mild days give air freely, and supply the plants with moderate waterings once a week or fortnight.

During the Winter season, continue to admit air less or more every mild calm day, by opening some of the windows, from nine or ten, to three or four o'clock in the afternoon, but if the weather changes sharply cold at any time of the day, shut the windows, or in very wet or foggy weather, generally keep the Green house close to exclude the damps as much as possible; and in frosty weather, be careful to defend the plants by keeping the glasses constantly shut, except when but moderate frost and calm sun-shining days occur, may give air moderately two or three hours in the middle of the day; but otherwise keep all close; and in very rigorous frosts, it is proper to defend the glasses on the outside with shutters, or in default of these, with large thick garden mats nailed up close, and which may continue night and day; or in sun-shining days, the mats may be part removed in the forenoon, while the frost continues

continues severe; likewise in sharp frosty weather, if the Green-house is furnished with flues, make moderate fires every evening, also in the day time, when the frost is very severe, and also in very foggy, or in excessive wet weather, or strong thaws after long severe frost, &c. gentle fires in an evening or morning, occasionally, will be necessary to expel the damps.

In mild weather, give sometimes gentle waterings when the earth of the pots appears dry, observing, in this, to give it very sparing and seldom to the succulent exotics, more freely to the woody and other plants; but always moderate at this season, not above once a week or fortnight, or as it may appear necessary by the earth drying considerably, keeping the earth only very moderately moist, never rendered very wet, which at this time would prove greatly detrimental, as it would be long before the earth recovered a moderate temperature, and in its very wet state, would chill the tender fibres of the roots, and occasion many of the plants to drop their leaves, or wholly perish some tenderer kinds, and as to the succulent plants above-mentioned, they being full of moisture, require very little water during the Winter, only sometimes a small portion when the earth is very dry, just to moisten it as moderately as possible.

In watering the Green-house plants, it is proper, sometimes, when the leaves are foul, or dusty, to water all over the head; which will clean and refreshen the leaves of a lively appearance.

While the plants remain in the Green-house all Winter, decayed leaves will often occur, and young tender shoots will casually decay, all which should be detached according as they appear.

Where the surface of the earth in any of the pots, binds or crusts hard, loosen it occasionally.

After the severity of Winter, or cold weather is past, and the mild season of Spring advanced, give larger admillions of fresh air, accordingly, still encreasing it in proportion as the warm weather commences; likewise, give water more freely, but still with some moderation.

moderation, during the continuance of the plants in the house.

Likewise, in the Spring, it will be of advantage to stir the earth in the top of the pots an inch or two deep, or occasionally in March or April, loosen the top earth, and a little way down round the sides, removing the loosened mold, and fill up the space with fresh earth to the top of the pots, and give water to settle the new earth close, which will prove very beneficial in encouraging the plants in their Spring and Summer growths.

Or in the Spring, any plants requiring larger pots, and some fresh earth, may be shifted therein in March, April, or beginning of May.

Also, if any plants of myrtles, geraniums, oranges, lemons, or other kinds, have irregular, ill-formed, or naked shabby heads, they may in the Spring, be pruned as required, to give them the desired form, or to encourage their emitting supplies of young shoots to form a full head.

Towards the commencement of Summer, or warm settled weather in April and May, encrease the admission of fresh air considerably, to harden the plants by degrees to the full air, for removing therein for the Summer season; and in May, when mild weather, sometimes leave the windows open day and night to prepare the plants gradually and more effectually for removal into the open air aforesaid, the middle and latter end of May, and beginning of June.

Summer, or warm settled weather, commenced in the beginning or middle of May, begin to remove many of the hardier plants into the full air, as myrtles, geraniums, olives, American aloes, and some others; and towards the end of May, if fine settled weather, otherwise not till the beginning of June, take out the oranges, lemons, oleanders, and all the other exotics, except the more tender succulents, as the African aloes, ficoides, cereuses, &c. which may remain until the middle or end of June, especially if much rain happen, or in which case, may retain them in the

Green-

Green-house till settled dry weather, generally observing in the first removal of the Green-house plants into the open air for the Summer, to place them in a somewhat sheltered situation for a week or fortnight, till inured to the weather, then may be placed where they may be required, to adorn any principal compartments, disposed sometimes part in fore-courts, others to ornament conspicuous apartments in the Pleasure-grounds, sometimes arranged along the sides of main walks; or occasionally some are placed to form clumps on the sides of lawns, the pots plunged in the ground to appear like a shrubby clump; and in some places there are particular compartments allotted for an orangery, both for the oranges and lemons, and the whole collection of Green-house plants together, under one point of view.

When first removed into the full air, clear away decayed leaves and dead wood, or prune any casual irregular productions of shoots and branches in the head; likewise, loosen the earth in the tops of the pots, or if not done in the Spring, may fresh earth the top an inch or two deep, previously stirring and removing part of the old earth, and fill up with the fresh mold and watered.

During their Summer residence in the open air, give them plentiful supplies of water in dry weather, twice or three times a week, or oftener in a very dry hot season, and in which the small pots will require watering every day; but as in this season the earth in the pots dries very fast, it is adviseable to lay some mowings of short grass, where any, upon the surface, which will preserve the moisture longer.

In their Summer's growth, if any plants advance in irregular, rude, or long rambling shoots, they may be pruned to order as may be required to preserve the requisite regularity of the heads.

According as the different sorts of Green-house plants increase considerably in growth, they will require shifting into larger pots, and fresh earth some sorts that are free, and large growers will need it probably every year

or

or two; others of slow and naturally small growth will not require it so often, may be not once in two or three years or more, as in some kinds of small succulent plants and others, and some large growing kinds, as oranges, lemons, American aloes, large myrtles, &c. when after repeated shiftings into different sized pots to the largest dimensions, they will require shifting from pots into tubs, smaller tubs at first for two, three, or four years or more, and then shifted into others a size or two larger; these tubs for this occasion being made strong, and hooped with iron, furnished with two hooked iron handles at top, by which to carry them and the contained plants; or sometimes in considerably large plants, as in some large American aloes, the tubs required are so large and weighty, together with the earth and plants therein, that they are fixed upon a low-wheel carriage, in order for the more convenient moving them in and out of the Green-house, requiring several men to draw them.

The work of shifting is performed, both in the Spring, or early part of Summer, about March, April, and May, or occasionally in Autumn, about August and September, though for any principal shifting April, or early in May, is a good season.

In performing the requisite shifting, according as it may be occasionally required, having the larger pots, &c. of requisite sizes in proportion to the increased growth of the plants, and a quantity of fresh earth, place some oyster shells, or tile shreds, over the holes at bottom, then apply some fresh earth, draw or turn the plant designed for shifting, out of its present pot, with the ball of earth entire, pare away a little of the outside and bottom earth, and prune the dry matted fibres of the roots, also any disorderly growths of the head, place it with the ball into the new pot or tub, fill up round the sides with more fresh warm earth closely about the ball, and an inch or two over the top thereof; give directly a moderate watering to settle the new earth close in every part; and thus proceed in any
occasional

occasional shifting, either in smaller or larger as may be required, supplying them with very gentle waterings.

Or in shifting, if any plants appear of a weak or unhealthful, sickly state, most of all the old roots may be shaken from about the roots, of which prune out all decayed parts; also prune the head in some proportion thereto, cutting out any dead or very weakly shoots or branches, and wash the roots in a tub of water, then re-pot the plant wholly in fresh earth.

But as shifting into larger pots will only be required occasionally, it is adviseable, in plants not shifted, to give an annual dressing, by fresh earthing the tops and sides of the pots every Spring and Autumn; first stirring the top earth an inch or two, and a little down round the sides, removing the loosened mold, then fill up the space with new compost.

Or where fresh earthing is not thought necessary, it is very proper to loosen the top earth once or twice, or more, in the course of the Spring or Summer particularly, levelling it evenly again, it will give a neat appearance, and always prove serviceable to the plants.

When any of the woody plants, as myrtles, geraniums, oranges, &c. have irregular heads, they may be pruned in the Spring, to shorten straggling branches or shoots, or to cut out any very disorderly growths, that they may advance in a more regular form the ensuing Summer.

Also, if any of the shrubby or tree kinds casually become of a weakly state, with naked or thin straggling heads of branches, they may be headed down less or more in March or April; then either shifted into larger pots, or tubs, with some fresh mold, as already explained, or if not shifted, fresh earth up the top and down the sides a little way, as mentioned above; the plants will break forth into fresh shoots, and form a new head by the end of Summer.

Or any weakly plants headed down, and shifted as above, if they could be conveniently plunged in a moderate bark-bed, &c. in a glass case, for a month or two, it would forward them more effectually.

Sometimes

Sometimes Green-house plants, by some mischance, drop all their leaves in Winter, and frequently the branches assume a decaying state, it is generally proper in that case to prune most of the branches moderately short, and they will more effectually break forth stronger into fresh verdure of leaves and young shoots, to form a new head.

Or some sorts, as myrtles, geraniums, &c. having lost their leaves in Winter or Spring, then about May, when settled weather commences, may be turned out of the pots with the balls entire, the heads cut down, then plunge the roots into the ground in a warm border they will recover, and be furnished with good heads by August or September, then may be taken up with balls of earth, and re-potted ready to place in the Green-house in October, for the Winter.

Methods of propagating or raising the different sorts of plants in the Green House collection.

The propagation, or methods of raising Green House plants, is by seed, cuttings, slips, layers, suckers, offsets, parting roots, and some by budding, as in oranges, lemons, jasmynes, &c. and some by grafting and inarching.

By seed many of the Green House plants produce it abundantly in this country, as geraniums, &c. and of many others is obtained from abroad, and both of which sow in pots of rich light earth in Spring, March, April and May; and if the pots are plunged either in a bark-bed or dung hot-bed, under frames and glasses, it will forward the vegetation of the seed and young plants, though in want of hot-beds place the pots under glasses in a frame, or in the Green-House; and when the plants are two, three, or four inches high, prick them in small pots.

By cuttings of the young shoots of the last or same year, many of the Green house exotics are abundantly raised, such as myrtles, geraniums, and various other shrubby kinds; also many of the herbaceous, and most of the succulent parts, are also raised by cuttings: and
by

by which myrtles and geraniums, as aforesaid, are raised in abundance, in the neighbourhood of London. Take off either cuttings in Spring, in March, April, or May, of the young shoots of the former year, plant them in pots, several in each, and plunged in a hot-bed, they will soon strike root and grow; or the geraniums will strike in natural earth without artificial heat, as likewise the myrtles, by slips or cuttings of the small young shoots of the year, in June and July, and will succeed without hot-beds.

In the myrtles particularly, the setting gardeners in the vicinity of London, who raise amazing quantities annually for sale in the markets, &c. of that metropolis, always raise them principally by slips or cuttings of the small young side-shoots of the same year, performed generally in Summer, from about the middle of June, or in July, till August, when the shoots are a little hardened; then either slip off a quantity by hand, or cut them with a knife, about two or three to four inches long, detaching all the under leaves; and thus prepared, and having some largish wide pots filled with rich light fine earth, or wide shallow earthen pans six inches deep, made at the Potters for that purpose, for those who raise large quantities, filling them with earth as above; and in either of which prick the slips or cuttings one or two inches asunder, inserted within an inch or less of the tops. Give a light watering; then cover each pot down close with a hand-glass; they will probably strike the same year, or, if late planted, not completely till following Spring, &c. Or if plunged in a moderate hot bed under a frame and glasses, or placed in the bark-bed in the stove, and also covered down with a hand-glass as above, they will strike sooner, and more effectually, the same Summer. Give occasional shade from the mid-day sun, and supply them with gentle waterings; and in Autumn, at the approach of cold weather, remove the pots of cuttings into the Green-house or glass-case, or garden-frame under glasses for the Winter. May remain in the store-pots till following Autumn, when, if well advanced, may be transplanted into

into separate small pots ; or if any are well struck the first year, or in that ensuing, they, in May following, may be pricked in beds of natural earth in the full ground, in which they will grow freely, and encrease in good strength by September ; then should be transplanted singly into small pots, and soon after removed into a Green-house or frame, as before observed.

Thus the myrtles may be raised by planting at three different seasons. In Spring, about March, April, &c. by planting cuttings of the young shoots of last year, assisted by a hot-bed ; and about June or July by slips of the young shoots of the year, either wholly in natural earths or forward in a hot-bed or bark-bed, which two plantings will mostly strike the same Summer, especially if assisted by heat : and an Autumn planting, middle or end of August, or beginning of September, either natural or forced, as above hinted ; and those by the latter method will probably strike the same season, but without heat will rarely strike that year, but will be preparing for early vegetation next Spring and Summer.

Or slips or cuttings of myrtle may be pricked in square patches, for hand-glasses, in a bed of fine natural earth, and cover down each patch close with a hand-glass, to remain there all Summer and Winter, defended with said glasses ; and in Winter, when frosty weather, have the glasses covered with mats and straw litter, a competent thickness to guard the cuttings effectually from the frost, but uncovered daily in mild weather, keeping the glasses constantly over the cuttings ; and by next Summer, or Autumn, they will be well rooted and have shot at top, when, if well advanced, they may be potted off, to move to shelter of a Green-house or garden-frame the Winter following.

Or in planting the cuttings or slips of myrtles in beds of natural earth, as above, if doubtful of the ground being wet or very cold at bottom in Winter, liable to rot the cuttings, may previously bed the bottom with a stratum of coal-cinders and ashes, three or four inches thick,

thick, with six inches of good earth over this, in which to plant the cuttings. The stratum of cinders and ashes below will keep the soil dry and warm, to preserve the plants more effectually, that they may strike more freely.

As to the geraniums, cuttings thereof of the former and same year, or two or three years growth, will grow, and may be planted in Spring or Summer, either in pots several in each, till well struck for transplanting, watered, and shaded from the Summer's sun, or planted in a shady border in the full ground, or in any bed or border where they may be occasionally shaded. In both methods they will soon strike root freely, shoot at top, and make good plants the same year, early in Autumn, and may then be potted off separately, and in performing which, if room between the plants admit, they may be removed and potted with balls of earth, and will receive less check by removal; giving water, and shade from the sun till they take fresh root, and afterwards managed as other Green-house plants.

By the above method of slips, and cuttings of the young shoots, many other shrubby Green-house plants are raised; for slips of the young shoots, and cuttings thereof, are nearly similar, the former being slipped off by hand, close to the branches whence they proceed; and the latter is by cutting them off with a sharp knife; either of which, about three or four to five or six inches long, or more, divested of the lower leaves, planted in pots, and managed nearly as for the myrtles and geraniums; but if assisted by a hot bed, or under hand-glasses, they will strike sooner.

Likewise by cuttings of the shoots and stalks, branches, &c. several of the herbaceous exotics, and most sorts of succulent plants, are raised in Spring and Summer, from April or May till the end of July, planted either in pots, or a bed of light dry natural earth, under a frame or hand-glasses, to defend them from falling wet, especially the succulents; or may be forwarded in pots placed in a bark-bed, or other hot-bed.

They will soon strike the same year, to pot off separate in Autumn.

By layers of the young wood in the lower pliable branches, many of the woody Green-house plants may also be raised; performed in Spring and Summer, either in their own, or other pots placed near thereto: they will, in many sorts, strike the same year; others, probably, not effectually, till the second Spring and Summer; or any particular or curious sorts may be forwarded by plunging the pots, containing the layers, in a bark-bed: and when, in either method, they have struck good root, cut them from the parent plant, and potted singly,

By suckers from the roots, many of the Green-house tribe are also occasionally raised, both of the woody and succulent kinds, &c. and which may be detached in Spring, in March, April, May, &c. or towards Autumn, about August or September, with roots to each, and planted in pots. By this method all the tribe of aloes are principally propagated, and some other succulents, as well as many of the woody and herbaceous plants, though the two latter, in many sorts, propagate also by other methods.

And by off-sets of and parting the roots, many or most of the fibrous and fleshy-rooted herbaceous perennials are propagated in Spring and Autumn; also the bulbous and tuberous-rooted kinds by off-sets, proper to detach when the leaves decay; and likewise by off-set heads, and side-shoots, many of the succulent plants are raised, the off-sets, &c. taken off at any time when they occur, in Spring, Summer, and Autumn, and planted in pots of light dry soil.

By budding or inoculating, several of the more curious woody plants are propagated; effected by inserting buds of the desired varieties into the sides of stocks of the same family, as, for example, oranges and lemons in particular are always raised, of the desirable varieties, by budding the intended sorts into seedling stocks, raised from the kernels of ripe oranges or lemons, sowed in the Spring in pots; and if these are plunged in a hot-bed

bed it will forward them considerably sooner than without that aid: and when the seedling stocks are come up three or four inches high, the same or following year, prick them singly in small pots, giving water at planting; and if again plunged in a hot-bed, under glasses, shaded from the sun till they take root, when admit air, by tilting the glasses behind, or drawing them down a few inches, they will thus run up with strait clean stems, and when these are two or three feet high, or more, they may be budded in August, near the top, inserting one or two buds in each stock, performed by the common method, shaded from the mid-day sun for a week or two, or more, till the buds unite with the stocks, and the buds remaining dormant till next Spring, when the head of the stock being cut off, they will then push forth each one shoot; and in which they may be forwarded by plunging the pots in a moderate bark-bed, giving them air and water till the latter end of June, or in July, then may be fully exposed, to strengthen the bud-shoots.—And by the same method, the curious sorts of jasmynes, &c. may be raised, as also by layers and cuttings.

By grafting likewise, some woody exotics of the tree kinds are also raised, in particular varieties, performing it in the Spring.

Likewise by inarching, or grafting by approach, some particular species and varieties of tree and shrub kinds are propagated, and by which a new tree of any desirable sort may be raised in three or four months, and is practised sometimes, both in raising some curious or scarce species which propagate but reluctantly by other methods, and sometimes by way of curiosity, to raise a new tree expeditiously, such particularly as oranges, by inarching the branch of a bearing tree, that is furnished with fruit, into a seedling orange-stock of a proper size, performed in the Spring, about April. The branch unites with the stock by August following, when it may be cut from the tree, and remaining on the stock the new tree is formed, furnished with fruit of the inarched branch, though the having the inarching performed

with a bearing branch is not always material, only when required for curiosity, as before observed.

This work of inarching is effected by having a stock or stocks raised to a proper size in pots, then these placed near the tree from which you intend to inarch, so that the branch, as it remains on the tree, can be bowed down to the stock, to join thereto; the stock and branch thereby, when joined together, forming a sort of arch while they are effecting the union; observing, in proceeding to the operation, to mark the parts where the branch and stock readily join, cut away the bark and part of the wood two or three inches lengthways, both as equal as possible, cutting a small slit or tongue in that part of the branch and another in the stock, apply the cut parts exactly, joining the tongue of the branch into the gash in the stock, keeping the head of the branch uprightish; bind them both close with a ligature of fresh bass, continued a little above and below the cut joined parts; and then clay the grafted parts closely round over the tying, that no air, wet or drought can penetrate; placing also a firm stake, and to which tye the inarched branch, &c. secure against wind, &c. And as by August aforesaid it will be united with the stock, then cut the branch off from the mother-tree, sloping below the inarching and close to the stock, continuing a stake to preserve the branch from being displaced.

Of the Green-House plants, the American aloes are singular in not flowering till of a great age, supposed near an hundred years, discovering their efforts for flowering by the central leaves beginning to open; and at which time it is proper to assist them, by plunging the tubs containing the plants into a bark-bed or other hot-bed, in the Spring or beginning of Summer, the heat of which will forward their growth considerably, that the flower-stem will advance rapidly, to its full height in three or four months, producing a vast pyramid of flowers.

HOT-HOUSE OR STOVE;

General UTILITY, and Systematic DISPLAY,

PRINCIPAL HOT-HOUSE PLANTS,

AND

METHOD OF CULTURE.

A HOT-HOUSE or STOVE, in the horticultural line, is constructed to furnish a certain constant degree of artificial heat internally, at all seasons of the year, in which to raise and cultivate the most tender exotic plants, obtained originally from the hottest parts of the East and West Indies, America, Asia, and Africa; as the exotics obtained from these hot regions, cannot be cultivated in this country without the constant assistance and protection of a Hot-house, warmed internally by the continual heat of a tanner's bark hot-bed all the year, especially the pine-stove, and assisted by fire-heat in Winter; the bark-bed heat being requisite at all seasons, made in a capacious pit within nearly the length of the house, both to furnish a regular standard of heat to warm the internal air always to a high degree, equal to that of the native places of growth of the various tender exotics contained therein; and also in which to plunge the pots containing the more tender kinds, such as the pine apple plants in particular, which will not fruit in perfection unless they

are constantly plunged in the bark-bed: though most of the other sorts will succeed by continuing them in any part of the stove out of the bark bed; but the whole generally retained constantly in this preservatory, as the delicate tender temperature of the greater part will scarcely admit of removing into the full air in the heat of Summer, in this climate, to continue any considerable time; and although others less tender, will endure to be placed in the full air in the hot months of July and August, yet if much rain falls, or the nights prove chilly, they should be removed in again, or placed occasionally in a vacant glass-case or green-house, out of the weather, till the end of August, or beginning of September, then replaced in the hot house.

So that by the aid of a hot house, the construction and culture of which being now brought to such a state of perfection, we are able to imitate the temperature of heat of the hottest climates, and have the exotic plants of these distant hot regions in a state of prosperous growth, producing their flowers, and some their fine fruit in a high degree of maturity, as for example, the *Ananas*, or pine apple, a native of the hottest parts of South America, such as Surinam, &c. is, by the assistance of our hot houses, cultivated and fruited in the utmost abundance and perfection; and by which aid, numerous, most curious, beautiful and rare exotics now appear in the English gardens, whereby the curious in plants are gratified by seeing those of very different distant countries collected within a small compass.

But a hot house, or stove, is also of great utility in gardening, for raising various small early crops of some desirable hardy plants, flowers, and fruits of our gardens to perfection, sometimes two or three months before their natural season in the open ground, such as early strawberries, kidney beans, peas, &c. likewise cucumbers; as also some choice tree fruits, particularly grapes; and in fruit stoves, early cherries, peaches, apricots, plums, &c.; and also in hot houses, or forcing stoves, many sorts of choice flowers are blown in very early perfection,

perfection, as roses, hypericum frutex, and other small ornamental flowering shrubs, and several kinds of herbaceous flowers, as pinks, carnations, hyacinths, dwarf tulips, jonquils, &c. and any sorts of curious annual flowers: all which being in pots, may be placed in any part of the hot house, where room.

And a hot house is also of great use in assisting to raise several sorts of tender seeds in pots plunged in the bark-bed, as likewise to strike cuttings and layers expeditiously in the bark-bed, of many sorts of curious trees, shrubs, and herbaceous plants, and succulent kinds, both hardy kinds occasionally of the open ground, and of the green-house, as well as those of the hot-house, the cuttings, &c. being planted in pots, and plunged in the bark-bed of the hot-house, they will quickly strike root; and is particularly eligible either for striking cuttings, &c. of any particular sorts as succeed with difficulty in the natural earth, or others that may be required to be struck and run off as expeditiously as possible; as likewise seeds of many tender or other plants being sowed in pots, and plunged in the bark-bed, will grow freely, which in many kinds would not vegetate at all in this country without that assistance.

The hot house plants that require to have constant protection of that preservatory, consist of a great variety both of the tree, shrub, herbaceous, and succulent tribe, bulbous-rooted kinds, &c. all or most of which will succeed in a common pine apple hot house, as the heat requisite for the pines, is applicable to most other tender exotics of the torrid zone: though for full collections of plants, stoves of different constructions and dimensions are occasionally allotted to particular sorts.

The plants in general of the hot house must be kept in pots, and continued constantly in that apartment Winter and Summer: some plunged in the bark-bed, particularly all the pine apple plants, and others occasionally that are of the most tender nature; though most of the other exotics will succeed out of the

the bark-bed, and may be disposed upon the shelves, &c. in different parts of the house; allowing the whole moderate admissions of fresh air in warm sunny days, less or more according to the season; and necessary supplies of water to preserve the earth in the pots moderately moist; but for the general culture, see the directions after the arrangement or list of the plants.

There being different orders of hot houses and stoves, a bark or moist stove having constant bark-beds, and assisted by fires in Winter; and a dry stove, warmed by fire heat only, in Winter, and cold weather in the Spring, is for particular sorts of plants, such as many of the succulent plants; though a common bark and fire heat stove will generally be suitable to the general collection of hot-house plants, as far as room admits: but shall give some general observations in the construction and use of the different sorts of hot houses.

A bark stove is the most common or general hot house for the culture of pine apples, together with any other tender exotics, or hot house plants in general, is constructed both with flues for fire heat, carried all round the front, ends, and back walls, internally, and with a capacious wide pit, nearly the length of the house, and a yard or three feet and a half deep, in which to make a tanner's bark hot bed, both to assist in warming the internal air more effectually, and in its kindly, moderately moist degree, is suitable to many of the more delicate exotics, and in which to plunge the pots of various tender kinds, such as the Pine-apple, which in particular will not succeed, unless the plants are constantly retained in the bark bed, to have the advantage of that kindly moist, regular, durable heat about their rooms, as is peculiar to this kind of hot beds.

The other kind of hot houses, generally denominated a dry stove, being furnished with flues for fire heat only, and no pit for a bark bed, and is allotted principally for the less tender stove exotics, and many of the succulent kinds, which being full of moisture, succeed rather preferably

preferably in a dry than moist heat, the pots of plants being placed upon shelves or stands.

The erection of the different stoves may either be in the Pleasure ground, Kitchen garden, Nursery ground, &c. as convenient, generally in a somewhat elevated situation out of the wet, and where the full sun has free access the whole day, from rising to setting if possible.

All hot houses, &c. should range long ways, nearly east and west, with the front full to the south, having a brick or stone-work back wall ten or twelve feet high, or more, and only eighteen inches to two feet and a half high in the front and at both ends, upon which to have upright glass work in moveable sliding sashes, and with a sloping top also of glass sashes to slide up and down, and a brick work flue for fire heat constructed within side, ranging horizontally along the front and both ends to the back wall, where it may be in two or three returns one over the other, the uppermost flue terminating in an upright vent to discharge the smoke after passing through all the flues to warm them in the requisite degree of heat, generally having all the flues detached from the walls two, three, or several inches, to impart the heat from both sides; and for the bark-bed, an oblong pit nearly the length of the stove, by six to eight feet wide, and three and a half deep, formed by a thin brick wall raised two or three feet above the floor.

In dimensions, a hot house may be from twenty or thirty to fifty or a hundred feet long, from ten to twelve or fifteen feet wide, ten or twelve to fifteen feet wide, ten or twelve to fifteen feet high or more in the back, by six in the front, with sloping glasses extending from the top of the front sashes to that of the back wall.

A general hot house, or bark stove, serving both for the culture of Pine apples, and the various other tender exotics denominated Stove plants, or that require the constant aid of artificial heat, may, in dimensions, be from fifteen or twenty to fifty feet long or more, ten or

twelve wide, the same in height behind in the back wall, by five or six feet high in the front and end walls and glass work together, with a flue within carried horizontally along the front and ends, either singly, or double one over the other, continued to the back wall, where, as before observed, it may be in two or three returns, and in the bottom space of the house must be formed the pit for the bark bed, in dimensions as above, generally not sinking the bottom but little, or not more than a foot below the floor of the house, especially if a wet bottom, raising it two or three feet above by means of a surrounding parapet wall carried up quite from the bottom, so that in the whole, the pit will be three feet or three feet and a half deep, having the bottom of the pit paved with brick, the floor of the house with the same, or broad square tiles, and let all the wood work be well painted white in oil colour, both without and within.

The bark bed of the hot house pit should generally be made in the Autumn, to support a good heat all Winter.

Besides the above general bark stoves, it is eligible to have one or two smaller ones, serving as a nursery pit and succession apartments, for raising the young pines in particular, of a proper age and size for fruiting, then removed in successional order into the main hot house.

One of these appurtenances to the main stove may be smaller than the other, and built all round intirely with brick work five or six feet high behind, by four or five in the front, with sloping glasses at top, and have a flue for fire-heat carried round the upper part within; and this pit being filled with bark for a hot-bed, in which to plunge the pots of plants, and warm the inclosed air, serves to raise and contain the young Pine plants, &c. the first year, and is generally called simply the Pit or Bark pit.

The other additional nursery stove may be of larger dimensions, to receive the young plants from the pit the second year in their advanced growth, and may be either nearly

nearly in the form of the smaller one, or rather somewhat in the manner of the main stove, but neither so long, wide, or lofty, furnished with fire flues, and a bark pit within; and this serving to raise the succession Pine plants every year to a proper size for fruiting, and being thence removed in Autumn to the principal fruiting stove annually, in constant succession, is hence called the Succession House.

Though in many places one general hot house suffices both for raising the young Pine plants and fruiting the large ones, as well as to contain the collection of stove plants in general, which, however, is often attended with this disadvantage in the pines in particular, that as it is generally necessary to keep the main house in a higher degree of heat than is in general proper for the succession plants, it sometimes forces them (the latter) into fruit at an improper time, before they are arrived to an eligible age and size to yield proper sized fruit; hence appears the utility of having also either a Bark pit or Succession house, or both.

In Hot-houses, grapes are fruited early in great perfection, two or three months or more before their natural season; and to effect which, have some young vines planted along the outside of the front, at proper distances, and the stem of each drawn in through a hole, and the branches trained up under the sloping glasses at top.

The collection of Hot-house plants amounts to above two hundred different genera, of which, some genera furnish but one, others two, three, or many species, consisting in the different genera, of between four and five hundred species and varieties, composed of trees, shrubs, herbaceous and succulent plants, of many different growths and sizes, various in their leaves, flowers, and fruit, as before observed, and mostly all of which are retained principally for curiosity, except the pine apple plants, which both encreases the variety in a conspicuous degree, and produces annually, crops of most delicious fruit, ripening in high maturity in Summer and Autumn, from June till October, and sometimes

Sometimes the late sorts afford some fruit in the Winter season.

In regard to the general culture of the stove, and the plants contained therein, see it explained after the following arrangement of the genera and species, &c. of the Hot-house plants.

Having thus given the general intimations concerning the nature and utility of Hot-house plants, together with the necessary hints relating to the requisite conveniences of the Hot-house and stove apartments, necessary for the cultivation of these tender exotics, next follows a register of the principal different genera and species, &c. thereof, in the English or British gardens, and in which register, all the species and varieties are arranged in their proper genera or families, each genus under the Latin, or Botanic, and English name, where any, with the proper and most general names of the species, some of which serve as short specific distinctions of their difference, and of their natural residence or places of growth in the different parts of the world.

—Abrus (JAMAICA	FENCE)
WILD LIQUORICE)	— Pavoninus, or Peacock Adenantha
— Precatory Jamaica	Adiantum (MAIDEN
Wild Liquorice	HAIR)
Achras (AMERICAN	— Capillis veneris, or
MARMALADE)	True
— Mammosse fruited	— Pedated, or foot-
— (Sapota) or Mammee	shaped leaved
Sapota Tree	Eichynomene (BAS-
Achyranthus (ACHA-	TARD SENSITIVE
RYANTHUS)	PLANT)
Rough Achyranthus	— Great flowered
Adansonia (ÆTHIO-	— Moving plant
PIAN SOUR	Agave (GREAT AME-
GOURD)	RICAN ALOE)
Adenantha (BAS-	— Viviparous or Child-
TARD FLOWER	ing
	— Fetid

- Eetid or Stinking Lily
- (Karatto) or deep
- green leaved Agave
- Vera crucian
- Agave
- Albuca (BASTARD
- STAR OF BETH-
- LEHEM)
- Major or greater
- Minor, or less
- Channelled
- Upright
- Aletris (ALOE ALE-
- TRIS)
- Hyacinth flowered
- Ceylon variegated
- Cape stalkless
- Guinea jointed
- rooted
- Fragrant stalky Ale-
- tris
- Aloe (AFRICAN
- ALOES)
- Viscous Aloe
- Cob-web
- Ferox, or great
- prickly
- Balearican
- Alstroemeria (ALSTROE-
- MERIA)
- Pelegrinian purple
- spotted
- Ligta, or purple
- striped
- Amaryllis (LILY
- DANFODIL)
- (Atamasco) or Ata-
- mascan Lily
- Most handsome A-
- maryllis, or Jacobaea
- Belladonna, or Bella-
- dona Lily
- Queen Belladonna, or
- Mexican Lily
- Guernsey Lily
- Long leaved dwarf
- Ceylon striped
- flowered
- Oriental, or Brunf-
- wegian
- Waved purple
- Vittated, or rib-
- band
- Guttated, or
- spotted
- Radiated
- Amomum (GINGER)
- (Zingiber) or True
- Zerumbet) or Wild
- Amyris (AMYRIS)
- Balsamiferous
- Anacardium (INDIAN
- PLUM)
- Oriental Kidney
- shaped
- Annona (CUSTARD
- APPLE)
- Murexed, or prickly
- fruited
- Scaly
- Netted
- Asiatic
- Antholyza (ANTHO-
- LYZA)
- (Meriana) or greater
- pale Antholyza
- (Merianella) or less
- Antholyza
- Ringent

- Ringent or grinning
- (*Cunonia*) or scarlet Antholyza
- Æthiopian
- (*Maura*) or yellow Antholyza
- Apocynum (Dog's BANE)
- Shrubby
- Netted climbing
- Arctopus *echinatus*, or Hedge-hogged Arctopus
- Artemesia—Judean Sweet
- Aristolochia (BIRTH-WORT)
- Indian
- Lobated
- Areca *oleracea*, or Oleraceous Indian Nut
- Arum (WAKE ROBIN)
- *Calocasia*, or greater
- Seguinous, or Dumb-Cane
- Esculent, or edible
- Auriculated, or ear'd
- Painted
- Divaricated
- Crinited, or hairy
- Arborefcgent, or tree
- Perigrinate obtuse heart leaved
- Long rooted
- Arundo (REED)
- (*Bambos*) or Bamboo Cane
- Asclepias (SWALLOW-WORT)
- Gigantic, or Auricula-tree
- Curaffoan orange flowered Asclepias
- Teneriffian
- After *fruticulofus*—
- Shrubby After, or Starwort
- Banifteria *laurifolia*, or Laurus-leaved Banifteria
- Barleria (*Barleria*)
- (*Prionitis*) or prickly
- Barleria
- Box-leaved
- Bafella (MALABAR NIGHTSHADE)
- Red
- White
- Bauhina (*Baubinia*)
- Acuminated leaved
- Ungulated
- Spiked
- Tomentofe, or woolly
- Begonia *obliqua*, or Oblique Begonia
- Bignonia (TRUMPET FLOWER)
- (*Leucoxylon*) or Jamaica Tulip tree
- Indian Trumpet Flower
- Standing, or upright
- Peru

— Peruvian
Betula nana — Dwarf
 Birch
Bixa (ORNATTO)
 — (*Orellana*) or Ameri-
 can *Bixa*
Bocconia frutescens —
 Shrubby, or Tree
 Celandine
Boerhavia scandens, or
 climbing *Boerhavia*
Bombax (SILK-COT-
 TON TREE)
 — (*Ceiba*) or five-leaved
 prickly
 — Pentandrious
 flowered
 — Gossypinum, or Silk
 Cotton
Bontia (BARBADOES
 WILD OLIVE)
 — Daphne like
Borassus — Fan Palm
Blechnum Orientale —
 or Eastern Blech-
 num
Bromelia (PINE AP-
 PLE)
 — (*Ananas*) or Pine-
 Apple Plant
 — Pyramidal, or Sugar-
 loaf fruited
 — Oblong-oval
 — Roundish-oval
 — Yellow
 — Olive coloured
 — Black *Antigua*
 Pine
 — Montserrat Pine
 — White fleshed

— Gold-striped
 leaved
 — Silver-striped
 — Shining leaved
 — (*Pinguin*) or Wild
 Pine
 — (*Karatas*) or Jamaica
 Wild Pine
Brunia (BRUNIA)
 — Woolly
 — Mossy
 — Ciliated leaved
Brunfelsia — Ameri-
 can
Buddleja globosa, or
 Globular *Buddleja*
Buchnera — Æthio-
 pian
Cacalia (FOREIGN
 COLT'S FOOT)
 — Papillary, or Pim-
 ply
 — *Anteuphorbium*, or
 Spurge-bane
 — (*Kleinia*) or Cabbage
 Tree
 — (*Ficoides*) or Bastard
 Fig Marigold
Cactus (MELON
 THISTLE, Torch
 Thistle, &c)
 — (*Melocactus*) or greater
 Melon Thistle
 — Mamillary, or less
 Melon Thistle
 — Tetragonous or
 four-angled Torch
 Thistle
 — Pentangular
 — Heptan-

- Heptangular, or seven sided
- Hexangular
- Repand, or waved
- Octangular
- (*Royeni*) or nine, or ten angled Torch Thistle
- Woolly Sub-nine angled
- Flagelliform, or Whip-thong creeping Cereus
- Grand night-flowering creeping Cereus
- Triangular creeping, or prickly Pear
- Parasitic creeping
- (*Opuntia*) or common Indian Fig—Oval jointed
- Moniliform, or Necklace-shaped *Opuntia*
- (*Ficus Indicus*) or American Indian Fig
- *Tuna major*, or greater *Opuntia*
- Cochineal-bearing
- (*Phyllanthus*) or Sword-leaved *Opuntia*
- Peruvian
- Curassao leaf *Opuntia*
- (*Pereskia*) or Barbadoes Gooseberry
- Portulaca leaved
- *Camellia Japonica*
- Japanese Rose, or *Tsubakki*
- Canna (INDIAN
- SHOT) *AKARAB*
- Indian broad leaved, or *Cannacorus*
- *Variegated leaved*
- *Red flowered*
- *Yellow*
- Glauous leaved
- *Capparis* (CAPE TREE)
- Thorny Shrubby
- *Capficum frutescens*, or Shrubby *Capficum*
- *Carica* (PAPAW)
- (*Papaya*) Melon-shaped
- (*Posoposa* or Pear-shaped
- *Caryota* (DATE PALM)
- *Cassia* (WILD SENNA)
- (*Fistula*) or medicinal of Alexandria
- Five flowered
- Privet leaved
- *Serna*, or true
- Plane podded
- Slender podded
- Mimosa-like
- Two capuled
- Madras *Carica*
- *Cassiytha*—Threadform of Barbadoes
- *Cassuarina* (TINIAN PINE)
- *Equesitum* leaved
- Tuberous
- *Catellera* (HILY-THORN)

- Cedrela (BARBADOES
 CEDAR)
 Cerbera (CERBERA)
 — *Abou*, or oval
 leaved
 — (*Manghas*) or spear
 leaved
 Cestrum (BASTARD
 JASMINE)
 — Day-smelling
 — Night-smelling
 — Broad leaved
 — Mountain Cestrum, or
 South-sea Laurel
 Chamærops (DWARF
 PALM)
 — Humble, or Dwarf
 — Mild
 Chironia (*Chironia*,
 or AFRICAN CEN-
 TAURY)
 — Shrubby
 — Berry bearing
 — Lacerated, or torn
 Chrysophyllum
 (STAR-APPLE)
 — (*Cainito*) or Star-
 Apple
 — Smooth leaved
 Cinchona (PERUVIAN
 BARK)
 — Official, or com-
 mon
 Cissus (WILD
 GRAPE)
 — Heart leaved
 — Acid, or sour
 Clitoria (CLITORIA)
 — *Ternatea* or three'd-
 flowered, or pinnated
 leaved Clitoria
 — *White flowered*
 — *Blue*
 Clusia (BALSAM
 TREE)
 — Yellow
 CLAYTONIA — Purslane
 leaved
 Cocos (COCOA-NUT
 TREE)
 — Nut bearing
 Coffea (COFFEE
 TREE)
 Commelina (COMME-
 LINA)
 — African
 — Tuberous-rooted
 Copaisera (COMME-
 LINA)
 — African
 — Tuberous-rooted
 Copaisera (BALSAM of
 CAPE VI TREE)
 — Official
 Cordia — (LIGNUM
 ALOES)
 CORNUTIA — Pyra-
 midal
 Corypha (UMBRELLA
 PALM)
 COSTUS — Arabian
 Cocoloba (SEA-SIDE
 GRAPE)
 — Grape bearing
 — Punctated, or dotted
 fruited
 — Rubescent, or blush-
 ing
 Cotyledon (NAVEL-
 WORT)
 — Orbicular

- Orbicular
- Hemispherical
- Spurious
- Laciniated leaved
- Crassula (LESSER ORPINE)
- Perfoliate leaved
- Cultrated, or knifed
- Quadrated, or Whipcord
- Pellucid
- Dotted
- *Portulacaria*, or Purslane Tree-like
- Crinum (LILY ASPHODEL)
- African
- Broad leaved
- Asiatic
- American
- Long leaved
- Ceylon
- Pendulous
- Crescentia (CALAPASH TREE)
- CRODALARIA
- Laburnum leaved
- Turgid, or Swoln
- Chinese oval leaved
- Curcuma (TURMERIC)
- Long rooted
- Round rooted
- Cycas (SAGO PALM)
- Circinal, or ring-ed
- Broad leaved
- Croton (TALLOW TREE)
- Sebiferous, or tallow bearing
- Glabellous, or smooth
- (*Cascarilla*) or sweet scented croton
- Maple leaved
- Cyclamen, (CYCLAMEN, or Sow BREAD)
- Indian Cyclamen
- Odorous
- Cynanchum (AMERICAN SCAMMONY)
- Hairy American Scammony
- Suberous, or corky
- Cyathoxylum (FIDDLE WOOD)
- Cinereous
- Quadrangular
- Cytisus (CYTISUS)
- (*Cajan*) or American pigeon pea
- Daphne (DAPHNE, or WOOD LAUREL)
- Indian
- (*Cneorum*) or silvery
- Delima (*De'lina*)
- Sarmentous branching
- Dioscorea (Yam)
- Bulbiferous West-India Yam
- Dracæna (DRAGON TREE)
- (*Draco*) or true Dragon Tree
- Sword leaved
- Upright
- Ferreous,

- Ferreous, or irony
- Terminal herbaceous
- Dracæna
- Dracontium (DRA-
GON'S)
- Perforated leaved
- Spinose or prickly
- Many leaved
- Duranta (*Duranta*)
- Plumier's creeping
- (*Elisia*) or upright
- Duranta
- Ehretia (*Ehretia*)
- Tinus-leaved
- *Bourreria* or ovate
leaved Ehretia
- Echites (*Echites*)
- Uprightish
- Eleocarpus (*Eleocarpus*)
- Serrated laurus-leaved
- Elephantopus (ELE-
PHANT'S FOOT)
- Rough leaved
- Tomentous, or hoary
leaved
- Erythrina (CORAL
TREE)
- (*Corallodendron*) or true
Coral Tree
- Painted prickly
- Herbaceous Erythrina
- Erigeron (*Erigeron*)
- Fetid, or stinking
- Eugenia (POMME-
ROSE)
- (*Jambos*) or West-
Indian Pomme-Rose
- Malacca Pomme-rose
- Euphorbia (SPURGE)
- Triangular true Spurge
- of the ancients
- Canary prickly
- Spurge
- Official two-spined
spurge
- Venice Sumach
leaved
- Oleander leaved
- Padus leaved
- Cereus-form
Spurge
- Mauritian Sea Spurge
- Fagara (*Fagara*)
- *Pterota* or Chinese
Iron-wood
- (*Tragodes*) or prickly
Fagara
- (*Piperita*) Japan
Pepper, or crenated-
leaved Fagara
- Ferraria (STARRY IRIS)
- Undulated or waved
Ferraria, or Cyclamen-
rooted Starry Iris
- Ficus (FIG-TREE)
- Sacred Poplar-leaved
Fig
- Bengal roundish-leaved
- Racemose, or clustered
- Indian
- Nymphaea-leaved
- (*Sycomorus*) Sycamore-
leaved, or Pharoah's
Fig
- Dumosed or Bushy
- Dwarf creeping stalked
- Benjamin Fig
- Fritillaria (*Fritillaria*)
- Royal Crown (*Corona
Regalis*)
- Dwarf

- Dwarf Gardenia (CAPE JASMINE)
- Flowery Cape Jasmine
 - Single flowered
 - Double flowered
- Genipa (*Genipa*)
 - American
- Gesnera (*Gesnera*)
 - Tomentose, or hoary
- Gladiolus (GLADIOLUS OR CORN-FLAG)
 - Spiked Gladiolus
 - Sorrowful spotted flowered
 - Narrow-linear-leaved
- Gloriosa (SUPERB LILY)
 - Superb flowering Gloriosa, or superb Lily
 - Double flowered
 - Single flowered
- Gomphrena (GLOBE AMARANTHUS)
 - Perennial Gomphrena
- Gossypium (COTTON TREE)
 - Tree Gossypium, or palmated-leaved shrubby Cotton Plant
 - Barbadoes three-lobed leaved
- Grewia (*Grewia*)
 - Oriental, or Eastern
 - (*Miracos*) or panicled
- Grewia (*Grewia*)
 - White
- Guajacum (LIGNUM VITAE)
 - Official, or Common
- Holy, with obtuse folioles
- African acute folioled
- Gouania (*Gouania*)
 - Domingo Gouania
- Guarea (*Guarea*)
 - Guettarda *speciosa*, or Specious Guettarda of Java
- Guilandina (NICKAR TREE)
 - (*Bonduc*) or Yellow Nickar Tree
 - *Bonducella*, or less Nickar Tree
 - Lacerated or rendering
 - (*Moringa*) or Ceylon Nickar Tree
- Gurulla *Asiatica*
- Hæmanthus (BLOOD FLOWER)
 - Scarlet
 - Purple
 - Ciliated-leaved
 - Hairy
- Hæmatoxylum (LOGWOOD)
 - (*Campechianum*) Campeachy Wood, or Logwood
- Hedysarum (*French honey-suckle*)
 - Storax-leaved
 - Amentaceous
 - Moving Plant
- Helicteres (SCREW TREE)
 - (*Ifora*) or Screw Tree
- Heliotropium

Heliotropium (TURN-SOL)

— Peruvian sweet-scented

Heliocarpus Americanus,
or American Mulberry-
leaved *Heliocarpus*

Hernandia (JACK-IN-A-BOX)

— Sonorous, or Whistling
Hernandia

Hibiscus (SYRIAN
MALLOW)

— Poplar-leaved

— (*Rosa Sinenfis*) or
China Rose

— Mutable China Rose

— Viscous Mallow-leaved
Hibiscus

— Fig-leaved

— (*Abelmoschus*) or

Musky *Hibiscus*

— (*Sabdariffa*) or cut-
leaved *Hibiscus*

Hippomane (MANCHINEEL TREE)

— (*Mancinella*) or
Manchineel-Tree,
ovate-leaved

— Two-glandulous, with
oblong leaves

Hura (SAND BOX-TREE)

— Crepitant, or Crackling
Hura; (the seed vessels
burst with a loud explo-
sion)

Hymenæa Courbaril, or
LOCUST TREE

Jatropha (FRENCH
PHYSIC NUT)

— Multifid leaved

— (*Curcas*) or Heart
angular leaved

Jatropha

— Stinging

— (*Manibot*) or Cassava
Tree

Illicium Floridanum, Florid

Illicium, or Anise-seed
Tree of Japan

Illecebrum Lanata, or
Woolly *Illecebrum*

Indigofera (INDIGO)

— Tinctorous, or Dyer's
Indigo

— Climbing Indigo

— Psoralea-like

— Silvery

Jussieua repens, Creeping

Jussieua, or Indian

Primrose

Justicia (MALABAR
NUT)

— (*Adhatoda*) or concave
flowered Malabar Nut

— (*Ecbolium*) or reflexed
flowered Malabar Nut

— Hyssop leaved

— Painted leaved

Ixora (WILD INDIAN
JASMINE)

— Scarlet flowering

Laurus leaved

— American oblong

leaved

— White Indian

Kampferia Galanga, or
oval leaved Galangal

Lagerstroemia Indica, or

Indian *Lagerstroemia*

Lantana

- Lantana (*American*)
 VIBURNUM)
 — Involucrismed leafy
 flowered
 — (*Camara*) or leafless
 flowered bandata
 — Prickly stalked
 — Sage leaved
 — Three leaved
 — Odorous white
 Laurus (*BAY-TREE*,
 &c.)
 — Stinking Bay
 — (*Cinnamomum*) or Cinna-
 mon Tree
 — (*Cassia*) or Bastard
 Cinnamon, or ever
 flowering Bay
 — (*Persea*) or Allegator
 Pear
 Lavendula (*LAVEN-
 DER*)
 — Multifid leaved
 — Pectinated, or Comb-
 leaved
 Lawsonia *spinos*a, or Spiny
 Lawsonia
 Leea (*Leea*)
 — Curled, jointed stalked
 — Equal, downy stalked
 Lechea *major*, or Greater
 Lechea
 Limodorum *tuberosum*, or
 Tuberous Purple
 Helleborine
 Limonia *trifoliata*, Three-
 leaved Limonia, or
 Mandarin Orange
 Lobelia *longiflora*, or
 Long-flowered Cardinal
 Flower
 — Coronopus leaved
 Lotus *Jacobaeus*, or Jaco-
 bean Black Lotus
 Lynchnis (*CAMPION*)
 — Scarlet Chinese
 Campion
 — Coronated, or Crown
 Malphigia (*BARBADORS
 CHERRY*)
 — Smooth leaved
 — Glittering leaved
 — Stinging prickly
 — Verbascum leaved
 Malva *Campensis*, Cape
 Mallow
 Mammea *Americana*, or
 American Mammee
 Apple
 Mangifera *Indica*, or Indian
 Mango-tree
 Maranta (*INDIAN*)
 — FLOWERING REED)
 Arundinaceous, or
 Reedy Maranta
 — (*Galanga*) or Indian
 Arrow-rooted
 Martynia *perennis*, Peren-
 nial Martynia
 Melastoma *holosericea*,
 Melastoma or American
 Gooseberry
 Mesua *ferrea*, Irony Mesua,
 or Indian Rose Chestnut
 Michelia *Champaca*, Sweet
 Yellow Michelia, or
 Champacau
 Mimosa (*SENSITIVE
 PLANT*,

PLANT, and ACACIA)

- Sensitive Plant
- Modest or humble Sensitive Plant
- Lively herbaceous Sensitive Plant
- Plenated, or double, annual Sensitive Plant
- Pernambuco trailing Sensitive Plant
- *Pigra*, or sluggish Sensitive Plant
- Fernasian fragrant Mimosa, or Indian Gazia
- Broad podded Acacia
- Arboreous, or Tree Acacia
- Horn-bearing, or great horned Acacia
- Horned, or long spined Tamarind leaved
- Nilotic Acacia, or Gum Arabic
- Broad leaved Acacia
- Dotted stalked Sensitive Mimosa
- *Unguis Cati*, Cat-clawed, or hooked podded
- Circinal, or spiral podded
- Virgated or twiggy
- Glaucous leaved
- *Lebeck*, or Egyptian Tree Acacia
- Vague downy Mimosa
- *Murraya exotica*, Exotic Murraya

Musa (PLAINTAIN TREE)

- Paradise Plaintain Tree, which having very long broad leaves, and vast clusters of fig-like fruit, is supposed to be the fig tree of Paradise
- Sapient Plaintain Tree
- *Bibai*, or most ample leaved Musa
- Myrtus (MYRTLE)
- Ceylon Myrtle
- (*Pimento*) Jamaica Allspice, or Aromatic Myrtle
- *Long leaved*
- *Broad leaved*
- Brazilian broad leaved Myrtle
- *Munchausia speciosa*, or Specious Munchausia
- Nerium (OLEANDER)
- (*Oleander*) Double flowered
- Nyctanthus (ARABIAN JASMINE)
- Sambac, or Arabian Jasmine
- *Double flowered*
- *Most large double*
- *Variiegated*
- *Single*
- *Arbor tristis*, or Sorrowful Tree
- Olea (OLIVE TREE)
- Most odorous Chinese Olive
- *Ophioxylum serpentinum*, Snake-

- Snake-like Ceylon
 Ophioxylon
 Oxalis (WOOD SOR-
 REL)
 — Purple
 — Yellow
 — (*Pes capræ*) or
 Granulous-rooted
 yellow Oxalis
 Pancratium (*Pancratium*
Lily, or SEA
 DAFFODIL)
 — Ceylon Pancratium
 — Mexican
 — Carabæan
 — Amboina broad leaved
 — Gibraltar Pancratium
 — African
 — Carolinian
 Parkinsonia *aculeata*,
 Passiflora (PASSION
 FLOWER)
 — Laurus leaved
 — Sawed leaved
 — Suberous, or cork-
 barked
 — Silk leaved
 — Round leaved
 — *Murucuja*, or Moon-
 shaped leaved
 — Red flowered
 — Normaline emarginated
 leaved
 — Fetid, or stinking
 — Minimous, or small
 flowered
 — Apple shaped fruited
 — Quadrangular stalked
 — Dotted leaved
 Patagonula *Americana*, or
 American Patagonula
 Pentapetes (INDIAN
 Vervain MAL-
 LOW)
 — Purple, or Scarlet
 Petiveria (GUINEA
 HEN WEED)
 — Alliaceous, or garlicky
 scented
 — Octandrious flowered
 Phoenix *dactylifera*, or
 Date-bearing Palm
 Phyllanthus (SEA SIDE
 LAUREL)
 — *Epiphyllanthus*, or
 Lance-leaved Phyl-
 lanthus
 — *Niruri*, or Upright
 herbaceous Phyllanthus
 — Great flowered oval
 leaved
 — *Emblica*, or Berry-
 fruited Phyllanthus
 — Madras wedge-shaped
 leaved
 Physalis (*Alkekengi*, or
 WINTER CHERRY)
 — Curassioan Winter
 Cherry
 — Viscous
 — Peruvian
 Phytolacca *dioica*, or
 Dioicous American
 Nightshade
 Piper (PEPPER)
 — Black round Indian
 Pepper
 — (*Amalago*) or Long
 Jamaica Pepper
 — Long Indian Pepper
 — Obtuse

- Obtused leaved
- Reticulated, or Netted leaved
- Piscidia Erythrina* Bastard Coral Tree, or Jamaica Dog-wood
- Pisonia aculeata*, Prickly *Pisonia*, or Fingrigo
- Plumbago Zeylanica*, Ceylon Plumbago, or Leadwort
- Climbing Plumbago
- Plumeria* (WEST INDIA JASMINE)
- Red flowered
- White
- Obtuse leaved
- Poinciana* (BARBADOES FLOWER FENCE)
- Pulcherrimous, or most beautiful, with Spines in pairs
 - *Chinese Spineless*
- Elated, or tall unarmed
- Bijugated, single spined
- Polemonium rubrum*, or Red Greek Valerian
- Polianthes tuberosa* (or TUBEROSE)
- Common single flowered
- Double flowered
- Polypodium* (POLYPODY FERN)
- Golden Polypody, or Hare's Foot Fern
- Auriculated, or eared
- Three-leaved
- Portulacca Anacamperos*, or Shrubby Purslane
- Portlandia* (*Portlandia*)
- Great flowered
- Hexandrious flowered
- Psidium* (GUAVA)
- Pear-bearing
- Apple-bearing
- Vittated, or filleted
- Pforalea* (*Pforalea*)
- Pinnated leaved
- Prickly leaved
- Braçteated, or floral leaved
- Bituminous
- Pterocarpus* (*Pterocarpus*)
- Polygonoideous, or Knot-grafs like
- Leafless
- Pteris* (FERN)
- Caudated, or Tailed Jamaica Fern
- Lineated Jamaica Fern
- Randia* (*Randia*)
- Mild, or thornless
- Prickly
- Rauvolfia nitidis*, or Glittering four-leaved *Rauvolfia*
- Rivinia* (*Rivinia*)
- Humble
 - *Canascent*, or hoary
- Ostandrious flowered
- Rondeletia Americana*, or American tinus leaved
- Rondeletia*
- Saccharum* (SUGAR CANE)
- Officinal, or common
- Dwarf
- Salicornia fruticosa*, or Shrubby glass-wort
- Sapindus* (SOAP BERRY)
- T — (*Saponaria*)

- (*Saponaria*) or Indian Soap-Berry
- American
- Spinous Jamaica
- Senecia (GROUNDSEL)
- (*Pseudo China*) or Bastard China Root
- Sida (INDIAN MAL-LOW)
- Heart leaved
- Rhombus leaved
- Many flowered
- (*Abutilon*) or roundish heart-leaved Sida
- Sideroxylum (IRON WOOD)
- Unarmed, or thornless
- Thorny
- Solanum (NIGHT-SHADE)
- Guinea Nightshade
- Verbascum leaved
- Sodom Nightshade, or Apple-bearing Solanum
- Fiery, or Red spined
- Indian Pear fruited
- Bonarian
- Mammosse golden fruited
- Tomentose, or downy leaved
- Oak leaved
- Sophora (*Sophora*)
- Tomentose Sophora, or Silvery Colutea
- White flowered
- Two flowered
- Cape Sophora
- Angular leaved
- Small leaved
- Spondias (AMERICAN PLUM)
- (*Myrobalanus*) or Black American Plum
- Yellow flowered
- Stapelia (*Stapelia*)
- Variegated flowered, spreading branched
- Hairy upright branchy
- Mammillary, or Warty
- Swietinia *Mahogoni*, or Mahogany Tree
- Tamarindus *Indica*, or Indian Tamarind Tree
- Theobroma (CHOCOLATE NUT)
- Cacao, or Chocolate Nut
- (*Guazuma*) or Bastard Cedar
- Angustous, or Narrow Chinese Cedar
- Tournefortia (*Tournefortia*)
- Sawed leaved
- Volubilated, or twining climbing
- Cymose umbelled
- Most stinking
- Diffused, or spreading
- Triumfetta *Lappula*, or Burry Triumfetta
- Turnera *Ulmifolia*, or Elm-leaved Turnera
- Urena *lobata*, or Lobated Indian Mallow
- Urtica *nivea*, or Snowy Chinese Nettle
- Verbesina *alata*, or Winged Indian
- Verbesina

Vinca

Vinca (PERIWINKLE)	— Canella, or laurus-
— Rose Periwinkle of	leaved Winterana
Madagascar	— Aromatic Winterana
Vitis (Vine)	Xylophilla (LOVE
— Three leaved Indian	FLOWER)
— Indian heart leaved	— Long leaved
Volkameria (Vo'kameria)	— Broad leaved
— Unarmed, or smooth	— Zamia (DWARF
stalked	PALM)
— Prickly stalked	— Dwarf-sawed leaved
Winterana (WIN-	— Intire leaved
TER'S BARK)	

In the foregoing arrangement of the Hot-house plants, it may be observed, that some sorts mentioned in the Green-house collection, are also introduced in this, which determines that they, being either tenderer than the generality of other Green-house exotics, and liable to suffer in that conservatory in hard Winters, it is adviseable to introduce some also into the Stove in that season, as a place of greater security, or that some kinds of curious flowering plants, although hardy enough to live in a Green-house all Winter, yet being kept in the Hot-house, they flower in greater perfection, and oftener, as in some of the amaryllis, and African aloe, &c.

The Hot-house plants consist of trees, shrubs, herbaceous, fibrous-rooted kinds, and succulent plants, as before observed; all of which being cultivated in the nurseries for sale, and where those who are about to make a collection, may be furnished.

They are raised by different methods, as by seed, suckers, off-sets, layers, slips, cuttings, in Spring, Summer, and Autumn, sowing the seeds, planting the suckers, off-sets, slips, layers, cuttings, &c. in pots in rich earth, and plunge them in the bark bed in the Hot house, they will all soon grow in their different ways, then when the young plants are advanced a little in growth, plant them out separately in other pots.

Some sorts are also raised by crowns, that is, the pine apple plants, in particular, producing a stocky crown of leaves at top of the fruit, forming a young plant, and also sometimes small suckers at the base of it; and by both of which, detached and planted in pots, and placed in a bark bed, &c. will grow freely, and form proper plants, and by which, and the suckers from the root, the pine plants are commonly propagated, attaining an eligible size in two years to produce fruit; and sometimes early planted strong suckers and crowns will, in one year's growth, by the end of Summer, become good fruiting plants.

All the Hot house plants in the foregoing arrangement, must be planted in pots, and constantly continued therein, proportioning the pots smaller or larger, according to the nature of growth, and different sizes of the plants, some being of diminutive growth, others slow growers, they must have small pots in proportion, and as others are free shooters, and some attain some considerable size, allow these pots larger dimensions, such as 24's, or 16's, &c. in the advanced state of the plants; all which of the woody and herbaceous kinds may be potted in any light rich garden earth; but the succulent kinds, on account of their peculiar exceeding moist quality, should have a light dry sandy or rubbishy soil.

Observe, in potting the different plants, that as there are holes at the bottom of the pots for discharging the superfluous moist in the occasional waterings, be careful, before putting in the earth, to place some pieces of tile, or oyster shells, one over each hole, both to keep the aperture from being clogged up, and the earth of the pots from being washed out in watering, as well as to confine the roots of the plants within the pot.

In potting the plants, first put some earth in the pots, a quarter, or half full, or more, according to the size of the roots, or of the ball of earth thereto, of such as are removed with balls, then placing the plant in the pot, fill up with more earth to the brim, shaking the
pot

pot gently to settle the earth close about the roots, and directly give a moderate watering.

Generally observe, in putting such plants as can be removed from one pot to another, with a ball of earth about the roots, keep the said ball as intire as possible, trimming away a little of the outward old earth at sides and bottom, together with any matted or long straggling roots, then place it with the ball into the new pot, and fill up around with fresh earth, and give some water.

Dispose the plants, the smaller ones towards the front, and the taller plants behind, plunging some of the more tender kinds into the bark bed, such as all the pine-apple plants, in particular.

In the bark Hot-house, furnished with a pit for a bark bed, this should be filled with new tanner's bark, obtained from the tan yards; the principal season for which, is Autumn, about August, September, or October, as may be required, though it may be done at almost any time when necessary; but for a general renewal of the bark bed for the reception of the pine apple, and to assist in warming the internal air of the house more effectually throughout the Winter, it is most eligible to be performed in Autumn, principally towards the latter end of September, or in October, or beginning of November, at latest, in order that it may afford a good heat all Winter, as observed.

The tanner's bark, for this purpose, should be such as is moderately fresh, not having been too long cast out of the tan vats to have become decayed; and that of the middling size is best, and not too small and earthy, nor very wet; and when brought home, if it appears very full of moisture, either throw it in a heap to drain and ferment in heat, or if very wet, spread it to dry in the sun for a day or two, then carry it into the pit of the Hot house, filling it up therewith to the top, or two or three inches, or more above, to allow for settling, it will soon ferment and heat in a proper temperature, which sometimes proves violent at first, and in which case the plants must not be plunged fully till the great

burning heat is over, or at least do not plunge the pots of plants above half way for the first week or two; observing, as it is principally the pine plants that are to occupy the bark bed, place the tallest plants behind, and so proceeding in gradual order to the lowest in front, at a foot or more distance between the pots.

The other plants may be placed some upon shelves, and tops of the flues, &c. and others you wish to forward in growth, may be plunged in the bark bed.

With regard to the general management of the Hot-house, and culture of the plants, it must be observed the plants are always to remain in the house; and the pine plants, in particular, continued constantly in the bark beds: observe the following particulars in their Winter and Summer culture.

In Winter, from October till May, it is necessary to make fires every evening, about four or five o'clock, to warm the flues sufficiently to impart a proper heat therefrom to warm the internal air in a requisite degree till morning, when, also in frosty, cold, cloudy, and foggy weather, it is necessary to make a moderate fire, and in very severe frosts, keep up a fire all day long, for the air of the house must be always kept to a certain regular degree of heat, equal to that of hot countries, from which the plants were originally obtained, and as a sure guide to this, it is necessary to have a thermometer suspended in the middle of the Hot-house, having the proper degree of heat for the pine apple, (*Ananas*) marked thereon, placing it with the back towards the sun, that it may be affected only by the heat of the house, and by the rising and falling of the liquid spirit in the glass tube, effected more or less by the power of the internal temperature, and requisite degree thereof, necessary for the culture of the (*Ananas*) or pine-apple, as before hinted; and the heat proper for the plants is applicable to the culture of most, or all the other tender exotics of this conservatory, being always careful never to raise the heat too greatly by means of the fire, generally never more than five degrees over or under the standard mark on the thermometer: in this manner

manner the fire is to be continued every night, &c. till May, then to cease making fires for the Summer, till next October.

As to the bark-bed heat, this generally continues a constant, moderate, and regular heat, two or three months without any trouble, affording both a fine moist growing warmth to the roots of the pines, and other plants plunged therein, as well as impart a most agreeable mild heat day and night, to assist warming the heat of the house, both in conjunction with that of the fires in Winter, and without, so as in fine mild days, no fires will be necessary even in the Winter season; and in Summer, the bark-bed is sufficient night and day without any fire at all, from May to October.

However, as the bark bed will gradually decline in heat after two or three months, when the pots being taken out, and the tan being forked over to the bottom, it will renew its heat in a proper degree for two or three months, or more, longer; then, when the heat is found much decreased, is renewed by forking over again, as above; or previously, about January and April, add a third or fourth part of new tan, first removing as much of the old at top, forking up the remaining old and new together, which will receive the heat till July or August, and forking it over once more, and if thought needful, a portion of fresh tan, as above, will continue the bed in proper order till October, when the old bark should be removed, and the pit filled again with a portion of fresh tan from the tanneries.

During the Winter, a little fresh air should sometimes be admitted; but always sparingly, only in fine calm mild sun-shining days, when if a good heat in the house, may slide open some of the front or top glasses, one, two, or three inches, about ten or eleven o'clock, till one or two, or shut close sooner if the weather changes cloudy, or the air sharply cold.

But, as the Spring and warm weather in March, April, &c. advances, give air more freely in fine warm

sunny days, admitting it an hour or two sooner in the forenoon, by nine or ten in the morning, and continue till two, three, or four in the afternoon, if the weather continues mild and sunny; but if the weather changes unfavourable, be careful to shut close accordingly in due time, so as to keep up always a regular degree of heat in the House.

Water, during the Winter, will be requisite to the Hot-house plants almost in general, but in a moderate degree, generally performing this in sunny days in the forenoon, about eleven or twelve o'clock, the woody and herbaceous plants will require a moderate supply of moisture about once a week, or ten or twelve days, or a fortnight, &c. or according as the earth in the pots become dry, the pines in particular, as being plunged in the moist heat of the bark-bed, will require but very gentle waterings at this season; but as the warm Spring season comes on, and a strong sun, the plants, in general, will require water more frequent, though always moderate, never to make the earth very wet; and as to the succulent plants, in particular, they being replete with moisture, should always be very sparingly watered, and not so often as the woody, and other kinds, as a too copious moisture is apt to rot some of the more tender kinds that are of very succulent growth.

In the Spring, about March or April, the bark-bed will require to be renewed with addition of some fresh tan from the tanner's, first taking up all the pots, and throwing out some of the old bark at top and sides that is become decayed and earthy; then fill up with the new equal to the quantity of about one-third of what the pit contains, and then fork up the new and old together, and directly replunge the pots of pines, &c. again, and the bed will thus revive its heat in a proper degree till July or August, when, by forking it over once more, it will support a good heat till October, when all the old bark must be removed, and the pit filled

filled with a quantity of new tan for a fresh bed for the Winter, &c.

About March or April, such of the young pine plants, and others requiring larger pots, let them now be shifted. Having for this purpose clean pots of a due size larger (32's or 24's, if strong plants) take opportunity of a warm dry day, take up all the pots, and proceeding to shift them, turn each plant out of its present pot with the ball of earth about its roots; trim away a little of the old earth at the sides and bottoms, and any long or matted fibres of the roots; then, having put some fresh earth in the new pot, place the plant with the ball entire therein, fill up with more fresh earth, and directly water it moderately; and thus proceed to each plant, till the whole is shifted. And at this time let the bark-bed be forked up to the bottom, previously adding, if thought expedient, about one third of new tan, as above advised, first removing some of the old wasted top bark, filling up the pit with the new; and then fork up the whole equally together, and directly plunge the pots in due order. The bed will thus recover a lively heat, and soon make the plants strike fresh root into the fresh earth.

It may be remarked, that in shifting the plants, if any assume a sickly state, shake them entirely out of the old earth, trim the roots close, and cut away all dry or decayed parts; then plant them in entire fresh earth, give water, and plunge them in the bark-bed.

Though in the Spring-shifting the young pines, some chuse to dis-root the plants, and shift them wholly into entire fresh earth; that is, they shake every plant entirely out of the old earth, then prune all the fibres of the roots close, and filling the pot with new compost, or fresh mold, plant the pines therein, one in each pot, close the earth about the roots, and give a very gentle watering, then plunge them in the bark-bed previously prepared as above: and thus the plants make wholly new roots or young fibres, emitted into en-

fine fresh earth, they will advance in a strong free growth.

In Summer leave off making fires, some time in May, as soon as the weather settles in warm, after which the heat of the bark bed will sufficiently warm the internal air of the house till October.

All this season of Summer continue to admit fresh air every fine sunny day, by sliding open some of the front and top glasses more or less, from two or three to five or six inches, or more, in proportion to the power of the sun, from eight or nine in the morning till four, five, or six in the evening, observing to open and shut the glasses wider and closer by degrees, according as the heat of the day encreases and decreases, so as always to support the internal air of a proper degree of heat.

Waterings must also be well attended to all Summer, two or three times a week to the woody and herbaceous plants; the succulents will not require it so often, and always more moderate than the other kinds. The morning, from about eight to nine or ten o'clock, or in the afternoon about four or five, is the proper time for performing the watering, at this season.

Any particular plants, requiring larger pots, may be shifted with balls of earth about their roots, though March and April, and August, are the more eligible seasons for performing any general shifting.

According as the pine-apples ripen in Summer and Autumn, and are cut for use, be careful to procure a sufficiency of the crowns which grow on the top of the fruit, as also the suckers produced at the base of the apple, in order for planting to raise a successional supply of young plants; for these, and the suckers produced at the bottom of the plants, are the only parts by which to propagate the pines; the bottom suckers being also generally in proper order when the fruit is ripe, or soon after, to be taken off for planting.

When the ripe fruit is served up to table, and not before, the crowns at top are to be taken off for planting;

ing; likewise any small suckers produced at the base of the fruit may be detached for the same purpose; and the suckers arising at the bottom of the old plants, when from about five or six, to eight, ten, or twelve inches length, are also proper to be detached as principal young plants, and prepared for planting: observing, that as both the crowns and suckers are of a somewhat succulent nature at bottom, when first taken off it is proper, previous to planting, to lay them upon a shelf, &c. in some dry place, or in the Hot-house, for a few days, or a week or two, or more, to dry the succulence or moisture in the bottom part aforesaid, that they may not thereby rot in the earth, before they strike root, after being planted. Then, after they are thus prepared, having a quantity of small pots (48's) and some fresh earth, fill the pots therewith, trim off some of the bottom outer leaves, and cut off any hard part at bottom; plant them one in each pot, close the earth firmly about the inserted part, give a moderate watering, and plunge the pots into a bark-bed of a brisk heat, or into a new-made dung hot-bed, having some ran at top in which to plunge the pots, and to remain six weeks or two months to strike them effectually, then removed into a bark pit for the Winter, &c. and thus the young plants will strike good root, and grow at top, and the second year attain a proper size to produce fruit.

Thus every year your stock of young pines must be renewed, for the same plants do not produce fruit more than once.

The young plants, raised as above, may be continued either in a bark-pit or succession-house, if either, all Winter, or for the first year or longer; or where there are no such appendages to the main Hot-house, they may be placed in the said principal pinery along with the fruiting plants, &c. if there is proper room, though it proves always more successful to have them in a detached pit or succession-house.

Or, where there is not sufficient accommodation of proper succession-houses or other appendages of bark-pits, &c. for the young succession pines, they, as before observed,

observed, may be placed in a dung hot-bed, under garden frames of proper depth, furnished with top-glasses; and in which may both strike the young plants or crowns and suckers, and continue them therein for the Winter; as also the older succession plants, if not room in the stove apartments, making the said dung hot-beds in Autumn; and for this purpose should be of good substance, about three feet and a half high in dung, or more, to allow for settling, placing the frame or frames thereon, and lay six or eight inches of any waste bark within the frame, upon the dung, in which to plunge the pots of pines; and which beds must be supported in a regular good heat, by applying strong linings of hot dung to the sides, when the heat decreases considerably; or also, when the bed is greatly decayed, a new one may be made ready in proper time, in which to remove the plants, keeping up the heat by occasional linings, as in the former: and when Winter or cold weather commences, have the sides of the frame defended all round with warm dry long litter, likewise cover the glasses every cold night, and in severe frosts, &c. And thus, by dung hot-bed heat only, may both strike the young pines, and, if occasion, raise them to an eligible size and strength for succession fruiting plants, to furnish the main stove at the proper season.

The young pines, propagated and planted as above in the succession pits, or any hot-house apartments or dung hot-beds, as may be convenient, will soon strike root and advance in growth, and arrive to a proper size by the end of the second Summer for immediate succession fruiting plants.

But observe, in the interim, that in their advancing young growth, according as they encrease considerably in size, they must be shifted into larger pots and some fresh earth; and which, in some of the strong early plants, will probably be required the same year, about September, or the whole the ensuing Spring, in March or April, or in August at farthest, removing them into proper sized pots (32's or 24's, large plants) as before suggested,

suggested, preparing the bark-bed, &c. by application of some new tan at top, and the new and remaining old forked up together, or in a renewed dung hot-bed, and the pots of plants then plunged therein, as already explained.

After this first shifting into larger pots and fresh earth, and plunged in a good heat, they will advance freely in a strong growth, some probably to a large size, by the end of the Summer, for fruiting plants the ensuing year, but more generally the whole will acquire a full growth the second Summer, and then, in Autumn, must again have a final shifting into the largest sized pots, to remain for fruiting.

In August or September, however, the large succession pine plants, which are for fruiting next year, must be shifted into the large pots, where they are finally to remain, (24's, or rather 16's, if strong full plants) having a quantity of rich garden mold, such as has been prepared in a compost heap well enriched with dry rotten dung, and if it has been mixed with a good quantity of light, surface loamy earth, it will be preferable. Turn the plants out of their present pots with the ball of earth entire, which, if watered the day before, the ball will more readily adhere about the roots, from which take away some of the outward earth at bottom and sides, and cut off the straggling roots; then, having some fresh earth in the new pots, two or three inches depth or more, place the plants therein, one in each pot, and which fill up with more fresh soil, and give water; and then forking up the bark-bed, previously adding some new tan, if thought necessary, working up the new and old properly, plunge the pots to their tops; or if a strong renewed heat, plunged only half, for a week or two, then fully plunged. After this, giving proper supplies of water, they will soon strike fresh root, and advance in growth; and thus they are to remain till October, when an entire new bark-bed must be prepared for their reception, in which to remain, to produce their fruit next Summer. Likewise the succession-plants, if they have advanced
confide-

considerably in growth, may also now be shifted into larger pots and fresh earth.

In shifting the plants, if any appear of a stunted or weakly growth, it will be proper to shake the ball of old earth entirely from their roots, which trim close, as observed in the Spring shifting, and then plant them in pots of entire new earth, and plunge them in the bark-bed.

Any of the other stove plants, that appear to require larger pots, may also be shifted as above, in March, April, &c. or in August.

In October, prepare a quantity of fresh tanner's bark, sufficient to fill the pit, to make a new bark bed for another year, in which to plunge the fruiting and other pine plants, to have a good heat to the roots, as well as to yield an eligible heat to warm the air of the house in Winter, assisted also in that season by fire-heat, for the benefit of the plants in general, as it is necessary always to renew the bark bed annually at this season; and the same bed, with forking over once in two or three months, together with the addition of about one-third or fourth part of new tan, two or three times, at three months interval, will support a proper heat for a twelve-month.

Before you add the general supply of new tan at this time, in order to make all possible advantage of what remains good of the old bark, it is proper to screen or sift it in the bed, clearing away all the small earthy part that passes through the screen or sieve, retaining the rest in the bottom of the bed; then, adding the new tan, work the whole up together, the new will revive the old, and the bed will soon be of a fine heat to receive the plants; being careful not to plunge them fully while the heat is violent, for fear of burning the roots, but when the burning heat is past, plunge the pots down to their brims.

The new bark being thus prepared, and the pots plunged, make a moderate fire in the evening; and from about the middle or end of October, continue the fires every night, and occasionally in the mornings, &c.
agreeable

agreeable to the rules before mentioned in the Winter Culture.

As the Hot-house plants are apt both to contract dust, and sometimes be attacked with insects, they should be carefully cleaned from all foulness, and also from vermin, especially the pine apples, which in particular are often severely infested with small insects, to destroy which may sometimes fumigate with burning tobacco, by means of a fumigating bellows, or occasionally strew tobacco dust, &c. over the leaves, or also to plunge and wash the heads in an infusion of tobacco leaves, &c. using likewise the prescriptions, &c. which some have published as infallible for this purpose; for every possible means should be practised in this case, as, if the insects get a-head, and over-run the plant, they will occasion a very unprosperous growth, and the pine-fruit be of no value.

One great thing to prevent insects, is to keep the bark-bed always to a good moderate heat, so as to keep the pines in a moderately free state of growth; for when they are either starved for want of bottom heat, or have at any time too much, to occasion a stunted sickly growth, the insects will make their appearance, as in the same case in the animal creation.

Likewise always keep the plants clean from contracted foulness, which will contribute exceedingly to a healthful thriving growth.

The propagation or methods of raising the various other exotic plants of the Hot-house, is, as before observed, effected some by seed, when it can be obtained, many by suckers, slips, cuttings, off-sets, and some woody kinds of the tree and shrub tribe also by layers.

By seed, which is often obtained from abroad, and in some plants produced in our Hot-houses, sow it in the Spring or Summer, &c. as soon as procured, in pots of light earth, and plunged in the bark-bed; and when the seedlings are advanced a few inches in growth, prick them separately in small pots, plunged also in the bark-

bark-bed, to forward their rooting, and run them off a little in growth; and according as they encrease considerably in size, agreeable to their respective growths, shift them into larger pots.

Suckers, and off-sets from the roots, or near the bottom, are afforded in many sorts, which, when they occur, may be detached, and planted in small pots, or according to the size of the plants, and plunged in the bark-bed, to run them off in fresh rooting and renewed growth.

By cuttings and slips of the young shoots, many sorts, both of the woody and succulent tribe, &c. are raised, and which may be performed in the Spring, Summer, and Autumn, the young side-shoots or others as they may occur, cutting them off, or some slipped off by the hand, especially some of the succulent kinds, or as it may seem most expedient, and from two or three, to five, six or eight inches long, or more; all planted in pots, one, two, or several in each, according to the size of the cuttings, slips, or that of the pots, as may be convenient, and plunged in the bark-bed; or observing previously, of the succulent kinds particularly, if, when cut or slipped off, they are very humid or moist in the part that was attached to the parent plant, lay them a few days, or as required, to dry the succulency, otherwise are sometimes apt to rot thereby in the earth before they strike; then plant these succulent kinds in pots of dry light soil, and plunged in the bark-bed as above; or some cuttings or slips, of woody or other kinds, may also be covered down close with hand-glasses, to promote their emitting roots sooner and more effectually; and when advanced in growth, those planted several together in a pot should be potted off separately, or others, increased in size, shift into larger pots; and thus these methods, by cuttings and side-slips, may be tried in any sorts that may seem eligible, in the different sorts of plants furnishing proper shoots, both in the shrubby, succulent, and herbaceous plants, either in side or off-set shoots, or cuttings of stalks, &c. or some advancing in a long naked growth, without
any

any side or off-set productions, as in some of the succulent tribe, and some others, such as the torch-thistle, &c. in which cuttings of the stem or top may be detached, of three or four to six or eight inches long, or more, as they may admit, according to size; or smaller stems, branches, shoots, &c. of similar growth, may be cut into separate lengths; and all planted as above advised.

Or by slips of side-shoots and off-sets, some plants emit bottom off sets, side-heads, and shoots below and above; all which may be slipped off close to where they originate, and planted according to the foregoing directions.

Likewise by off-sets of roots and bottom-shoots, both of some shrubby, succulent and herbaceous exotics, several sorts are occasionally raised, and which may be detached and planted as above.

Also, by off-sets of the root, the bulbous and tuberous-rooted kinds are commonly propagated, principally when the leaves decay.

By layers of young shoots, some of the shrubby and tree kinds of the Hot-house exotics are also occasionally raised, laying them in Spring and Summer, &c. in their own, or other pots placed near, and plunged in the bark-bed, to forward the rooting of the layers.

Likewise by budding, grafting, and inarching some trees and shrub kinds, of particular curious varieties are occasionally propagated, where proper stocks, on which to perform these operations, are attainable.

By crowns and suckers is the common method of raising the pine plants, as already fully explained under the article *Pine-Apples*, &c.

Thus, by one or other of the above different methods, the various exotics of the Hot-house are propagated, or encreased and raised; and in their future culture are to have larger pots occasionally, as required, and managed agreeable to the former general directions.

Methods

Methods of forcing various sorts of Plants, Flowers, Fruits, &c. in the Hot-House, to early perfection.

IN the Hot-house and Stoves, by their peculiar internal heat, designed principally for the cultivation of the tenderest exotics, many hardy and curious or desirable plants, flowers, and fruits, may be occasionally raised to early perfection in Winter and Spring, &c. as do not acquire maturity in the open ground before Summer and Autumn; and the proper season to begin to introduce them therein for forcing, is principally December, January, February, and March; and in several sorts admitted in succession every three or four weeks till May or June, and may consist of several different sorts, both of esculents and flowers, &c. and all introduced in pots; as sometimes pots of small-salad seeds, mint roots, early dwarf kidney beans, occasionally pots of early dwarf peas, cucumbers, strawberries; also roses, pinks, carnations, and various other flowering plants, bulbous and tuberous-rooted kinds, and small shrubs: all of which, in seeds, plants, and roots, should be sowed and planted in pots or boxes.

For example. To raise small fallading quickly in Winter by aid of a hot-house, sow a portion of cresses, mustard, and other seeds of small salad herbs, thickly in large wide pots, or in boxes of light earth; place them in the hot-house, give light waterings, they will soon come up, and attain perfection, for use: and to have a succession, sow some every week.

Likewise, to have green young mint, plant some old roots, from any mint beds, in pots or boxes, any time in Winter, place them in the stove, then you will soon have plenty of young mint in that season, planting a successional supply as required.

Also kidney beans plant in large pots or boxes in December or January, and once every three weeks till April; place them any where in the hot-house they will grow

grow prosperously, and yield good crops of young beans in February, March, and April, &c. planting successive crops once a fortnight or three weeks in small pots, three beans in each, and when the plants are two or three inches high, turn them out with balls into larger pots, to remain.

Peas and beans likewise may be sowed or planted separately, in large pots, and placed towards the front of the stove, will also yield a small early produce.

Strawberries also will succeed remarkably well for early crops in the hot-house; having, for this purpose, some scarlet and Alpine kinds, one or two-year-old plants, of a proper age for bearing; plant them in pots the Autumn before, and placed in the Hot-house in December, January, February, March, April, &c. they will produce a succession of ripe strawberries from January or February till June, when the natural ground crops will come in.

Cucumbers likewise being sowed in pots or boxes, or young plants previously raised in the bark-bed, or in any common hot-bed, and planted in the above-mentioned pots or boxes, and placed near the top glasses behind, they will produce early fruit in Winter and Spring.

Flowering plants of various kinds, both fibrous and bulbous-rooted kinds, being in pots or boxes, and placed in the hot-house in Winter and early in Spring, they will flower in good perfection early in those seasons, such as pinks, carnations, early dwarf tulips, hyacinths, jonquils, polyanthos-narcissus, and many other kinds.

As likewise roses, *fyringas*, *hypericum frutex*, or any other small ornamental and odorous flowering shrubs, being in pots, and placed in the hot-house in January, February, March, &c. they will blow early.

Curious annual flowers may also be raised to early bloom in the hot-house, as balsams, cock's comb, globe amaranthus, mignonette, ten-week's stocks, &c. sowing the seed in pots of light fine earth, and placed
where

where room admits, or plunged in the bark-bed, and the young seedling plants pricked out singly in small pots; they will attain good perfection at an early season: and may also sow and introduce candy-tuft and sweet peas, &c. in pots.

And in the Hot-house, cuttings, slips, layers, and seeds of many curious hardy trees, shrubs, and other plants, as also of the Green-house tribe, may be occasionally greatly forwarded by means of the bark-bed, either such as are naturally slow in vegetative growth, or any that may be required to be forwarded on any particular occasions, as much as possible placing the cuttings, slips, layers, seed, &c. in pots of earth, and plunge them into the bark-bed: they may thus be greatly expedited in the order of vegetation required, in a most desirable manner, and then remove them to their places in the open ground, Green-house, &c.

As likewise in planting in pots, any particular curious tree and shrub kinds, &c. both of the open ground and Green-house, that in their natural growth do not strike root freely, or that you would forward therein as much as possible, they being plunged into the bark-bed of the Hot-house, if sufficient room, it will run them off quickly. Afterwards remove them into their proper places in the garden, &c.

Also in a Hot-house, vines being trained therein, will produce early grapes in great perfection in May and June, &c. and any large sorts, which do not attain good maturity in the open ground in this country, are forwarded by the assistance of a Hot-house, and ripen in full perfection early in Summer; the vines being generally planted in the open ground, close to the front of the Hot-house, and being trained each with a long single shoot for a stem; then, in the end of Autumn or beginning of Winter, or in January, or beginning of February, admitted through a small aperture above into the house, and trained up in the inside to the top and end glasses; and when they advance in shoots and branches, these trained along to thin slips of wood,
nailed

nail'd to the rafters or cross bars five or six inches from the glass-work, giving them the general culture of the stove, in regard to heat and admissions of air, and occasional pruning, as directed for vines in the open ground; they will produce ripe grapes early in Summer and Autumn, in great maturity and richest flavor.

Also, where there are forcing stoves and Hot-houses, principally for forcing fruit-trees to early production, constructed nearly in the manner of the Pinery and other stoves, having flues for fire, or some likewise furnished with bark-pits, to have the assistance also of bark-bed, heat, and having borders of rich earth formed within the Forcing-house, and in which, besides vines, having other trained fruit-trees planted, as peaches, nectarines, apricots, cherries, &c. advanced to a bearing state, as observed in the Fruit-Tree Division, they may be forced to early bearing, by making fires or bark-beds, or both, the latter end of January or beginning or middle of February, continuing the fires every evening till nine or ten o'clock, as also in cold mornings and severe weather.

FINIS.



